IQ: INVESTIGATING THE QUESTIONS

2013-2015 Released Test

Aligned to the Standards

CONTENT BUILDER FOR THE PLC

Math
Grade 4

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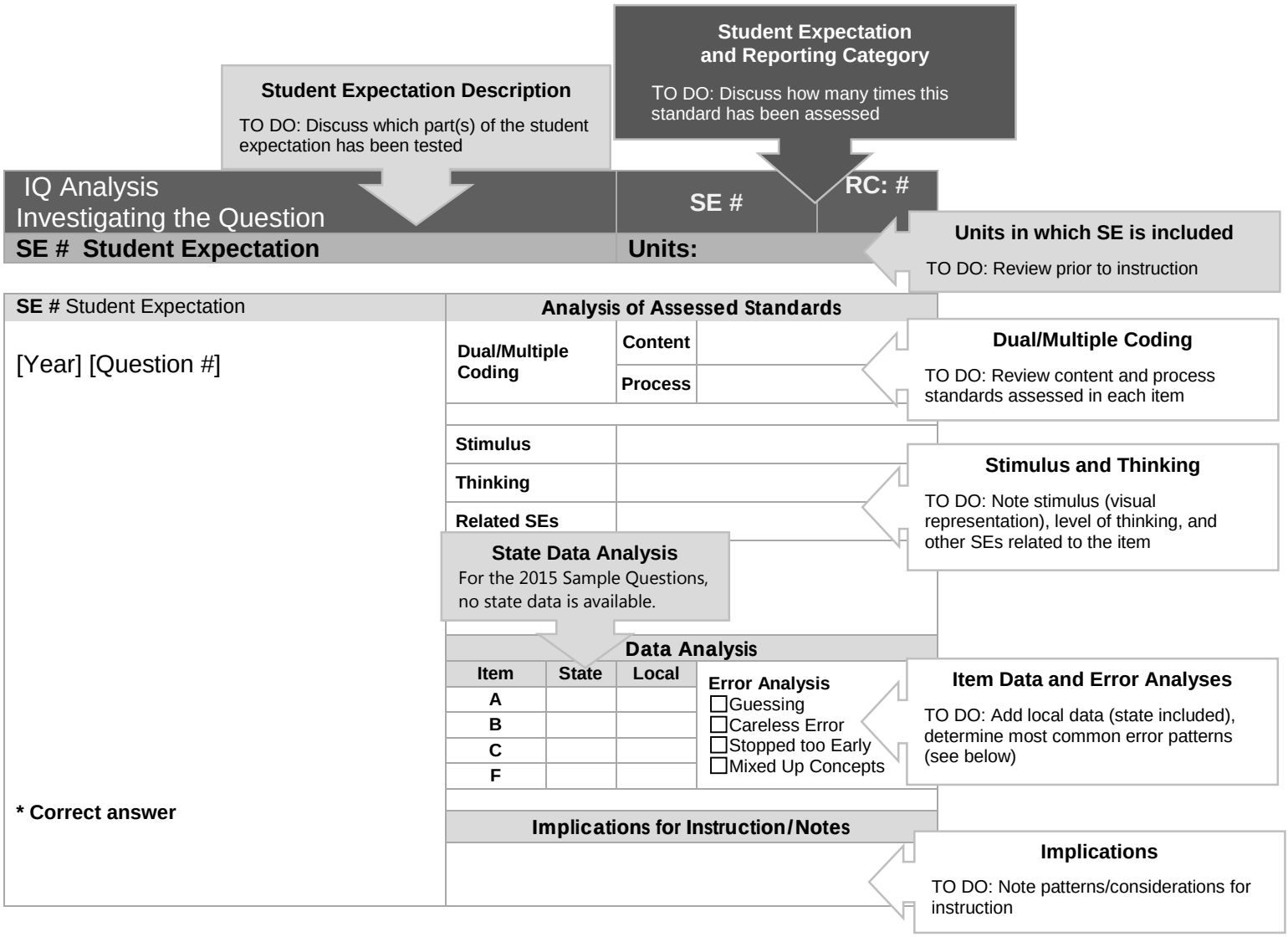
Users Guide - IQ [Investigating the Questions] Released Tests



Error Analysis | Type of Errors

The pattern of incorrect responses (highly chosen or distributed) indicates students may have made one or more of these error types:

- **Guessing**: Generally represented by equal distribution of incorrect answers. Students may not know how to start or may not know what the question is about.
- **Careless Errors:** Students cannot complete content specific procedures accurately. Make low-level, careless mistakes.
- **Stopped Too Early:** Students cannot transfer learning between contexts (item doesn't look like samples used in class), or they stop too early in problem solving.
- **Mixed Up Concepts:** Students misunderstand the underlying concepts. They may mix up concepts often related to academic vocabulary.

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4.2(A) interpret the value of each place-value position as 10 times the position to the right and as one-tenth of the value of the place to its left

2015 – Sample Q1

1 In the number shown, one digit is underlined and one digit is circled.

$$\underline{7}\textcircled{7},000$$

Which statement about the circled digit is true?

A Its value is 10 times greater than the value of the underlined digit.

B Its value is $\frac{1}{10}$ the value of the underlined digit.

C Its value is 70 times the value of the underlined digit.

D Its value is $\frac{1}{70}$ the value of the underlined digit.

*** Correct answer (B)**

Analysis of Assessed Standards

Multi Coding	**Content**	Supporting
	Process	4.1(B), 4.1(G)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B*		
C		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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IQ Analysis | Investigating the Question	SE 4.2(B)	RC: 1
4.2(B)	**Units:**	

4.2(B) represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals

2015 – Sample Q2

2 Lillian paid sixty-one dollars and thirty-nine cents for groceries. The digit 3 in this number has a value of —

A (3×10) dollars

B (3×1) dollars

C (3×0.01) dollar

D (3×0.1) dollar

*** Correct answer (D)**

Analysis of Assessed Standards

Multi Coding	**Content**	Readiness
	Process	4.1(A), 4.1(B), 4.1(D), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B		
C		
D*		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

IQ Analysis | Investigating the Question	SE 4.2(C)	RC: 1
4.2(C) compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols >, <, or =	**Units:**	

No test questions 2013 – 2015

IQ Analysis | Investigating the Question	SE 4.2(D)	RC: 1
4.2(D) round whole numbers to a given place value through the hundred thousands place	**Units:**	

No test questions 2013 – 2015

4.2(E) **Units:**

4.2(E) (New) represent decimals, including tenths and hundredths, using concrete and visual models and money

4.1(B) (Old) use place value to read, write, compare, and order decimals involving tenths and hundredths, including money, using concrete objects and pictorial models

2013 – Q7

Each picture below represents a different amount of money. In which amount of money is the digit 9 in the hundredths place?

A

B

C

D

*** Correct answer (B)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	7	
B*	41	
C	2	
D	50	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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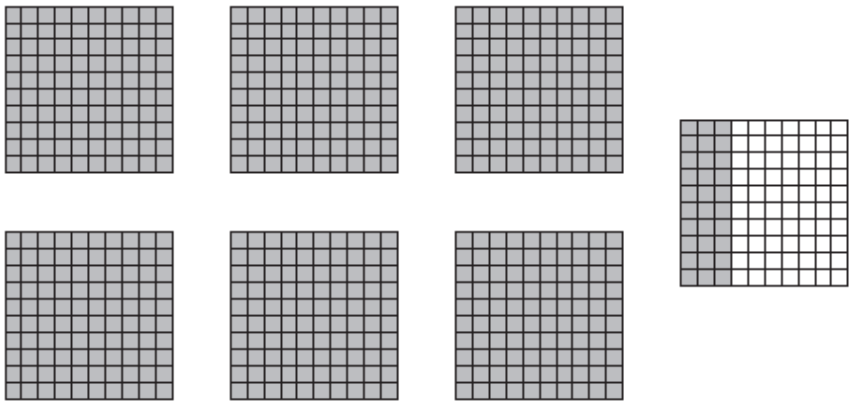
4.2(E) (New) represent decimals, including tenths and hundredths, using concrete and visual models and money

4.1(B) (Old) use place value to read, write, compare, and order decimals involving tenths and hundredths, including money, using concrete objects and pictorial models

2013 – Q37

The model below is shaded to represent a decimal.



How is this decimal written in words?

A Six and thirty hundredths

B Six hundred three

C Six and thirty tenths

D Six and three hundredths

*** Correct answer (A)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	**69**	
B	**3**	
C	**17**	
D	**11**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

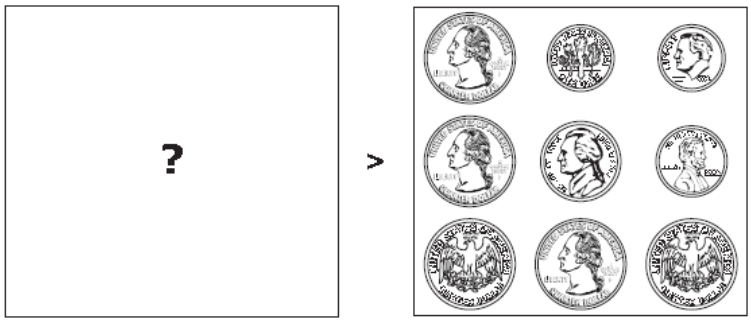
Implications for Instruction/Notes

4.2(F) (New) compare and order decimals using concrete and visual models to the hundredths

4.1(B) (Old) use place value to read, write, compare, and order decimals involving tenths and hundredths, including money, using concrete objects and pictorial models

2014 – Q10

Sherri has an amount of money that would make the comparison below true.



Which amount of money would make the comparison true?

F 

H 

G 

J 

*** Correct answer (H)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	5	
G	8	
H*	82	
J	4	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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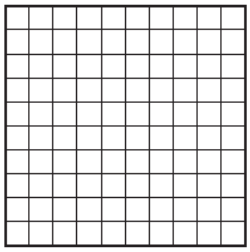
4.2(F) (New) compare and order decimals using concrete and visual models to the hundredths

4.1(B) (Old) use place value to read, write, compare, and order decimals involving tenths and hundredths, including money, using concrete objects and pictorial models

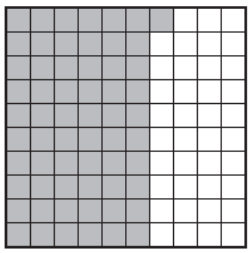
2014 – Q31

The decimal number 0.82 can be shaded on the grid below.

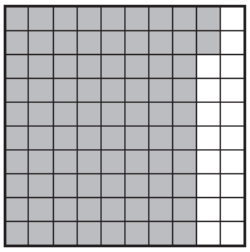


Which grid is shaded to represent a decimal less than 0.82?

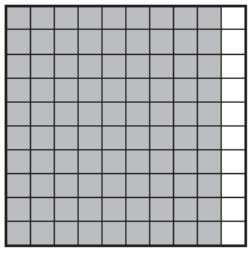
A



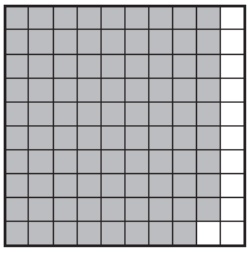
C



B



D



*** Correct answer (A)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	65	
B	2	
C	32	
D	1	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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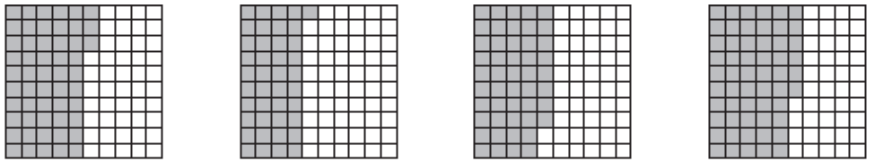
4.2(F) (New) compare and order decimals using concrete and visual models to the hundredths

4.1(B) (Old) use place value to read, write, compare, and order decimals involving tenths and hundredths, including money, using concrete objects and pictorial models

2013 – Q47

The shaded models below represent four different decimal numbers.



Which list shows these decimal numbers in order from least to greatest?

A 0.53 0.41 0.48 0.56

B 0.41 0.48 0.53 0.56

C 0.56 0.53 0.48 0.41

D 0.41 0.53 0.56 0.48

*** Correct answer (B)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	8	
B*	79	
C	10	
D	3	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.2(G) | **Units:**

4.2(G) relate decimals to fractions that name tenths and hundredths

2015 – Sample Q3

3 Antwaan decorated 2.5 cakes with chocolate icing. Which fraction is equivalent to this number?

A $\frac{25}{100}$

B $\frac{5}{10}$

C $2\frac{5}{10}$

D $2\frac{5}{100}$

*** Correct answer (C)**

Analysis of Assessed Standards

Multi Coding	**Content**	Readiness
	Process	4.1(A), 4.1(B), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B		
C*		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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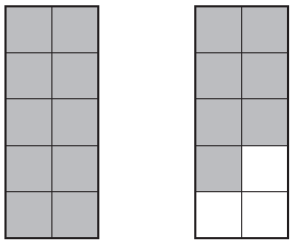
4.2(G) (New) relate decimals to fractions that name tenths and hundredths

4.2(D) (Old) relate decimals to fractions that name tenths and hundredths using concrete objects and pictorial models

2014 – Q24

The model below is shaded to represent the part of two cakes eaten at a party.



Which fraction and decimal represent the part of these cakes eaten at the party?

F $\frac{17}{20}$ and 0.17

G $1\frac{7}{10}$ and 1.7

H $1\frac{7}{20}$ and 1.7

J $1\frac{7}{10}$ and 1.07

*** Correct answer (G)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	10	
G*	69	
H	9	
J	12	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

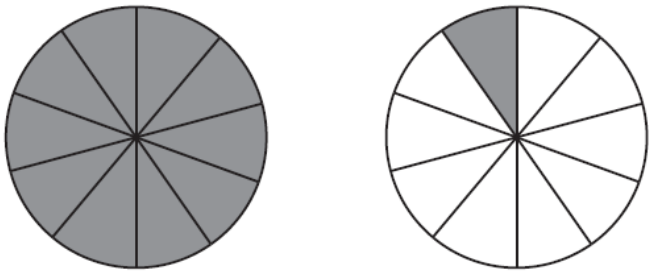
Implications for Instruction/Notes

4.2(G) (New) relate decimals to fractions that name tenths and hundredths

4.2(D) (Old) relate decimals to fractions that name tenths and hundredths using concrete objects and pictorial models

2014 – Q33

The model below is shaded to represent $1\frac{1}{10}$.



Which decimal does the model represent?

A 1.1

B 11.0

C 1.01

D 10.1

*** Correct answer (A)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	76	
B	3	
C	16	
D	5	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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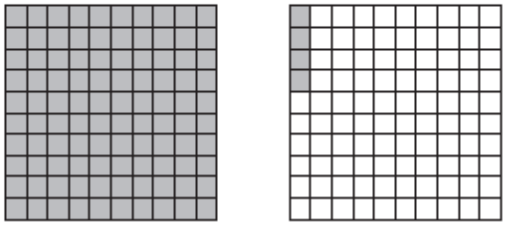
4.2(G) (New) relate decimals to fractions that name tenths and hundredths

4.2(D) (Old) relate decimals to fractions that name tenths and hundredths using concrete objects and pictorial models

2013 – Q2

The model below is shaded to represent $1\frac{4}{100}$.



Which decimal does the model represent?

F 1.04

G 1.4

H 14.0

J 1.004

*** Correct answer (F)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F*	85	
G	11	
H	1	
J	3	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

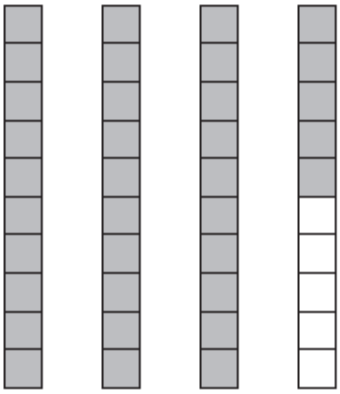
Implications for Instruction/Notes

4.2(G) (New) relate decimals to fractions that name tenths and hundredths

4.2(D) (Old) relate decimals to fractions that name tenths and hundredths using concrete objects and pictorial models

2013 – Q31

The model below is shaded to represent a number greater than 1.



Which fraction and decimal represent this number?

A $\frac{35}{100}$ and 0.35

B $3\frac{5}{10}$ and 3.5

C $3\frac{5}{100}$ and 3.5

D $3\frac{5}{10}$ and 3.05

*** Correct answer (B)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	12	
B*	67	
C	4	
D	17	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

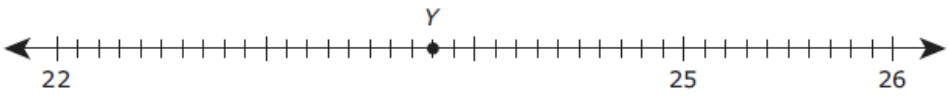
4.2(H) **Units:**

4.2(H) (New) determine the corresponding decimal to the tenths or hundredths place of a specified point on a number line

4.10(A) (Old) locate and name points on a number line using whole numbers, fractions such as halves and fourths, and decimals such as tenths

2013 – Q5

5 Which number does point *Y* best represent on the number line below?



A 24.8

B 23.2

C 24.2

D 23.8

*** Correct answer (D)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	6	
B	2	
C	4	
D*	87	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.3(A) | **Units:**

4.3(A) represent a fraction a/b as a sum of fractions 1/b, where a and b are whole numbers and b > 0, including when a > b

2015 – Sample Q4

4 Which expression is equivalent to $\frac{6}{5}$?

A $\frac{1}{6} + \frac{1}{5}$

B $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$

C $\frac{1}{5} + \frac{6}{1}$

D $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$

*** Correct answer (B)**

Analysis of Assessed Standards

Multi Coding	**Content**	Supporting
	Process	4.1(B), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B*		
C		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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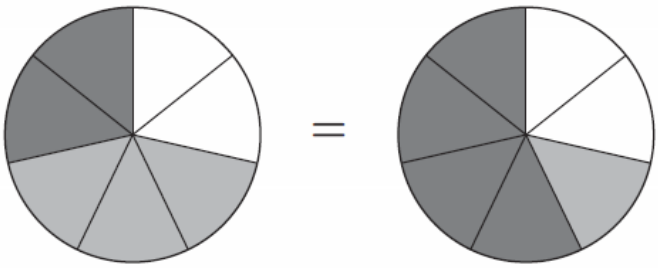
4.3(B) decompose a fraction in more than one way into a sum of fractions with the same denominator using concrete and pictorial models and recording results with symbolic representations

2015 – Sample Q5

5 The two models are shaded to represent the same fraction, $\frac{5}{7}$.

Model 1 Model 2



Which equation shows that the two models represent the same fraction?

A $\frac{2}{7}+\frac{3}{7}=\frac{4}{7}+\frac{1}{7}$

B $\frac{2}{7}+\frac{3}{7}=\frac{5}{7}+\frac{1}{7}$

C $\frac{1}{2}+\frac{1}{3}=\frac{1}{4}+\frac{1}{1}$

D $\frac{1}{2}+\frac{1}{3}=\frac{1}{5}+\frac{1}{1}$

*** Correct answer (A)**

Analysis of Assessed Standards

Multi Coding	**Content**	Supporting
	Process	4.1(B), 4.1(E), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	NA	
B		
C		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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IQ Analysis | Investigating the Question	SE 4.3(C)	RC: 1
4.3(C)	**Units:**	

4.3(C) determine if two given fractions are equivalent using a variety of methods

2015 – Sample Q6

6 Which statement about the fractions $\frac{5}{10}$ and $\frac{6}{12}$ is true?

A These fractions are both greater than 1, because their denominators are greater than their numerators.

B These fractions are both equal to 1, because their denominators are greater than their numerators.

C These fractions are equivalent, because their denominators are half their numerators.

D These fractions are equivalent, because their denominators are twice their numerators.

*** Correct answer (D)**

Analysis of Assessed Standards

Multi Coding	**Content**	Supporting
	Process	4.1(B), 4.1(G)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	**NA**	
B		
C		
D*		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.3(C) (New) determine if two given fractions are equivalent using a variety of methods

5.2(A) (Old) generate a fraction equivalent to a given fraction such as 1/2 and 3/6 or 4/12 and 1/3

2014 – Q19

Last year Ryan went to school for 36 out of 52 weeks. Which fraction is **NOT** equivalent to $\frac{36}{52}$?

A $\frac{10}{26}$

B $\frac{9}{13}$

C $\frac{72}{104}$

D $\frac{18}{26}$

*** Correct answer (A)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	**73**	
B	**11**	
C	**11**	
D	**5**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.3(C) (New) determine if two given fractions are equivalent using a variety of methods

5.2(A) (Old) generate a fraction equivalent to a given fraction such as 1/2 and 3/6 or 4/12 and 1/3

2014 – Q30

Jackson sold towels at the beach. If he sold 7 out of every 9 towels he had, which statement could be true?

F Out of 27 towels, he sold 21.

G Out of 18 towels, he sold 7.

H Out of 36 towels, he sold 35.

J Out of 72 towels, he sold 63.

*** Correct answer (F)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F*	56	
G	13	
H	11	
J	20	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.3(C) (New) determine if two given fractions are equivalent using a variety of methods

5.2(A) (Old) generate a fraction equivalent to a given fraction such as 1/2 and 3/6 or 4/12 and 1/3

2014 – Q42

A teacher bought a bag of clothespins. In the bag, $\frac{6}{18}$ of the clothespins are blue.

Which fraction is equivalent to the fraction of clothespins that are blue?

F $\frac{1}{2}$

G $\frac{2}{3}$

H $\frac{1}{4}$

J $\frac{1}{3}$

*** Correct answer (J)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	5	
G	9	
H	4	
J*	81	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

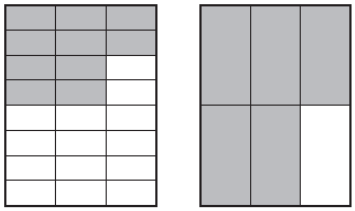
4.3(C) (New) determine if two given fractions are equivalent using a variety of methods

4.2(A) (Old) use concrete objects and pictorial models to generate equivalent fractions

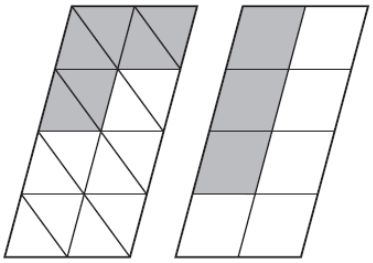
2014 – Q45

Which pair of models is shaded to represent equivalent fractions?

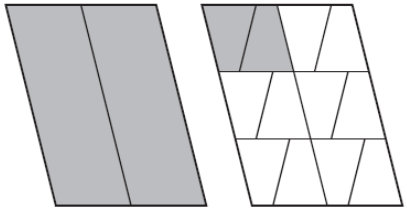
A



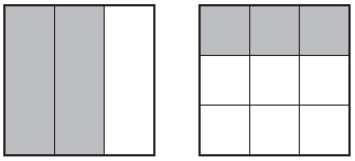
C



B



D



*** Correct answer (C)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	**8**	
B	**9**	
C*	**72**	
D	**10**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.3(C) (New) determine if two given fractions are equivalent using a variety of methods

5.2(B) (Old) generate a mixed number equivalent to a given improper fraction or generate an improper fraction equivalent to a given mixed number

2013 – Q6

Edna completed $4\frac{2}{3}$ puzzles. Which improper fraction is equivalent to the number of puzzles Edna completed?

F $\frac{9}{3}$

G $\frac{14}{3}$

H $\frac{10}{3}$

J $\frac{24}{3}$

*** Correct answer (G)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	**7**	
G*	**82**	
H	**5**	
J	**6**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.3(C) (New) determine if two given fractions are equivalent using a variety of methods

5.2(A) (Old) generate a fraction equivalent to a given fraction such as 1/2 and 3/6 or 4/12 and 1/3

2013 – Q17

Kwan has a garden. If $\frac{7}{10}$ of the plants in his garden are daisies, which statement could be true?

A Out of a total of 7 plants, 1 plant is a daisy.

B Out of a total of 50 plants, 7 plants are daisies.

C Out of a total of 35 plants, 15 plants are daisies.

D Out of a total of 50 plants, 35 plants are daisies.

*** Correct answer (D)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	11	
B	27	
C	11	
D*	51	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.3(C) (New) determine if two given fractions are equivalent using a variety of methods

5.2(A) (Old) generate a fraction equivalent to a given fraction such as 1/2 and 3/6 or 4/12 and 1/3

2013 – Q35

Antonia colored 36 of the 60 pictures in her coloring book. Which fraction is **NOT** equivalent to the fraction of pictures Antonia colored?

A $\frac{6}{10}$

B $\frac{3}{5}$

C $\frac{8}{20}$

D $\frac{18}{30}$

*** Correct answer (C)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	10	
B	15	
C*	65	
D	10	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.3(C) (New) determine if two given fractions are equivalent using a variety of methods

5.2(A) (Old) generate a fraction equivalent to a given fraction such as 1/2 and 3/6 or 4/12 and 1/3

2013 – Q49

Scott completed $\frac{4}{6}$ of a project on Saturday. Which fraction is equivalent to $\frac{4}{6}$?

A $\frac{16}{24}$

B $\frac{8}{18}$

C $\frac{16}{18}$

D $\frac{20}{24}$

*** Correct answer (A)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	77	
B	10	
C	7	
D	5	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

IQ Analysis | Investigating the Question

SE 4.3(D) **RC: 1**

4.3(D) **Units:**

4.3(D) compare two fractions with different numerators and different denominators and represent the comparison using the symbols >, =, or <

2015 – Sample Q7

7 Faith has completed $\frac{6}{18}$ of her math homework. Olivia has completed $\frac{4}{9}$ of her math homework. Which of these girls has completed a greater fraction of her math homework?

A Faith, because $\frac{6}{18} > \frac{4}{9}$

B Faith, because $\frac{6}{18} < \frac{4}{9}$

C Olivia, because $\frac{4}{9} < \frac{6}{18}$

D Olivia, because $\frac{4}{9} > \frac{6}{18}$

*** Correct answer (D)**

Analysis of Assessed Standards

Multi Coding	**Content**	Readiness
	Process	4.1(A), 4.1(B), 4.1(G)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B		
C		
D*		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

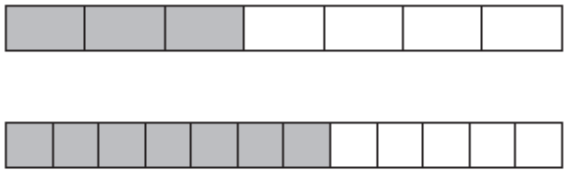
Implications for Instruction/Notes

4.3(D) (New) compare two fractions with different numerators and different denominators and represent the comparison using the symbols >, =, or <

4.2(C) (Old) compare and order fractions using concrete objects and pictorial models

2013 – Q16

The models below are shaded to represent two different fractions.



Which statement is true?

F $\frac{3}{7} > \frac{7}{12}$

G $\frac{3}{4} < \frac{7}{12}$

H $\frac{3}{7} < \frac{7}{12}$

J $\frac{4}{7} > \frac{5}{7}$

*** Correct answer (H)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(E)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	14	
G	8	
H*	77	
J	1	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.3(D) (New) compare two fractions with different numerators and different denominators and represent the comparison using the symbols >, =, or <

5.2(C) (Old) compare two fractional quantities in problem solving situations using a variety of methods, including common denominators

2013 – Q32

A teacher wrote several nouns, verbs, adjectives, and adverbs on the board. The table below shows the fraction of each type of word written on the board.

Words

Type of Word	Fraction of Words on Board
Noun	$\frac{3}{7}$
Verb	$\frac{3}{14}$
Adjective	$\frac{1}{14}$
Adverb	$\frac{2}{7}$

Which correctly compares two of these fractions?

F $\frac{1}{14} > \frac{3}{7}$

G $\frac{3}{7} > \frac{3}{14}$

H $\frac{3}{14} < \frac{1}{14}$

J $\frac{2}{7} < \frac{3}{14}$

*** Correct answer (G)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	7	
G*	76	
H	6	
J	12	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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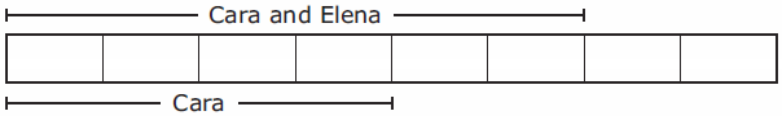
4.3(E) | **Units:**

4.3(E) represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operations

2015 – Sample Q8

8 Cara and Elena used fabric to make costumes for a talent show. Cara used $\frac{4}{8}$ of the fabric for her costume. The girls used $\frac{6}{8}$ of the fabric altogether.



What fraction of the fabric did Elena use?

A $\frac{10}{16}$

B $\frac{10}{8}$

C $\frac{2}{8}$

D $\frac{1}{2}$

*** Correct answer (C)**

Analysis of Assessed Standards

Multi Coding	**Content**	Readiness
	Process	4.1(A), 4.1(B), 4.1(E), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B		
C*		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.3(F) evaluate the reasonableness of sums and differences of fractions using benchmark fractions 0, 1/4, 1/2, 3/4, and 1, referring to the same whole

2015 – Sample Q9

9 Hailey and Wendy painted an entire wall together. Hailey painted $\frac{3}{7}$ of the wall, and Wendy painted the rest. Which statement is true?

A Hailey painted less than half the wall, and Wendy painted more than half the wall.

B Hailey painted more than half the wall, and Wendy painted less than half the wall.

C Each girl painted more than half the wall.

D Each girl painted less than half the wall.

*** Correct answer (A)**

Analysis of Assessed Standards

Multi Coding	**Content**	Supporting
	Process	4.1(A), 4.1(B), 4.1(G)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	**NA**	
B		
C		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.3(G) (New) represent fractions and decimals to the tenths or hundredths as distances from zero on a number line

4.11 (A) (Old) locate and name points on a number line using whole numbers, fractions such as halves and fourths, and decimals such as tenths

2013 – Q46

46 Which point best represents $36\frac{1}{4}$ on the number line below?

F Point *R*

G Point *S*

H Point *T*

J Point *U*

*** Correct answer (H)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	7	
G	10	
H*	67	
J	16	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.4(A) | **Units:**

4.4(A) add and subtract whole numbers and decimals to the hundredths place using the standard algorithm

2015 – Sample Q10

10 The locations and lengths of three of the longest tunnels in the world are listed.

- Gotthard Base Tunnel in Switzerland, 57.07 km
- Seikan Tunnel in Japan, 53.85 km
- Channel Tunnel between England and France, 50.45 km

What is the difference between the length of the Channel Tunnel and the length of the Gotthard Base Tunnel in kilometers?

A 3.22 km

B 7.62 km

C 6.62 km

D 7.42 km

*** Correct answer (C)**

Analysis of Assessed Standards

Multi Coding	**Content**	Readiness
	Process	4.1(A), 4.1(B), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B		
C*		
D		

Error Analysis
☐Guessing
☐Careless Error
☐Stopped too Early
☐Mixed Up Concepts

Implications for Instruction/Notes

4.4(A) (New) add and subtract whole numbers and decimals to the hundredths place using the standard algorithm

5.3(A) (Old) use addition and subtraction to solve problems involving whole numbers and decimals

2014 – Q22

22 Mrs. Zapata paid a total of $8.17 to mail three packages.

- She paid $2.77 to mail the first package.
- She paid $3 to mail the second package.

How much did Mrs. Zapata pay to mail the third package?

F $3.60

G $2.40

H $6.37

J Not here

*** Correct answer (G)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	6	
G*	72	
H	3	
J	19	

Error Analysis
☐Guessing
☐Careless Error
☐Stopped too Early
☐Mixed Up Concepts

Implications for Instruction/Notes

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4.4(A) (New) add and subtract whole numbers and decimals to the hundredths place using the standard algorithm

6.2B (Old) use addition and subtraction to solve problems involving fractions and decimals

2014 – Q42

42 Enrique bought a football and a puzzle at a store.

- He paid $15.35 for the football.
- He paid a total of $24.02 for the football and the puzzle.

How much did Enrique pay for the puzzle, in dollars and cents?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

*** Correct answer (8.67)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local	Error Analysis
8.67	65		☐Guessing ☐Careless Error ☐Stopped too Early ☐Mixed Up Concepts
	35		
	0		
	0		

Implications for Instruction/Notes

4.4(A) (New) add and subtract whole numbers and decimals to the hundredths place using the standard algorithm

5.3(A) (Old) use addition and subtraction to solve problems involving whole numbers and decimals

2014 – Q45

45 The table below shows the scores for two divers at a diving championship.

Diving Championship

Diver	Score
Carl	399.8
Eric	462.25

What is the difference between these two scores?

A 73.45

B 137.65

C 62.45

D 173.45

*** Correct answer (C)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local	Error Analysis
A	6		☐Guessing ☐Careless Error ☐Stopped too Early ☐Mixed Up Concepts
B	7		
C*	83		
D	3		

Implications for Instruction/Notes

4.4(A) (New) add and subtract whole numbers and decimals to the hundredths place using the standard algorithm

5.3(A) (Old) use addition and subtraction to solve problems involving whole numbers and decimals

2013 – Q4

4 Owen lives 145.25 kilometers from Houston, Texas. Sharon lives 209.5 kilometers from Houston. What is the difference between these two distances?

F 64.25 km

G 54.35 km

H 124.30 km

J 144.35 km

*** Correct answer (F)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F*	**85**	
G	**4**	
H	**3**	
J	**7**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.4(A) (New) add and subtract whole numbers and decimals to the hundredths place using the standard algorithm

6.2B (Old) use addition and subtraction to solve problems involving fractions and decimals

2013 – Q41

41 Mr. Lee mailed 3 packages. The greatest amount he paid to mail one of these packages was $3.60. The least amount he paid to mail one of these packages was $1.70. What could be the total amount Mr. Lee paid to mail the 3 packages?

A $8.30

B $11.50

C $5.10

D $10.80

*** Correct answer (A)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	5.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	**61**	
B	**5**	
C	**22**	
D	**11**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.4(B) (New) determine products of a number and 10 or 100 using properties of operations and place value understandings
4.6(B) (Old) use patterns to multiply by 10 and 100

2014 – Q29

Lionel sells boxes of greeting cards. The table below shows the number of cards in different numbers of boxes.

Greeting Cards

Number of Boxes	49	67	82	114
Number of Greeting Cards	4,900	6,700	8,200	

How many greeting cards are in 114 of these boxes?

A 10,000

B 1,140

C 11,400

D 11,004

*** Correct answer (C)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	16	
B	11	
C*	70	
D	2	

Error Analysis
☐Guessing
☐Careless Error
☐Stopped too Early
☐Mixed Up Concepts

Implications for Instruction/Notes

4.4(B) (New) determine products of a number and 10 or 100 using properties of operations and place value understandings
4.6(B) (Old) use patterns to multiply by 10 and 100

2013 – Q25

A season pass at a water park costs $100. A total of 125 people paid for a season pass. What was the total cost of these season passes?

A $225

B $12,500

C $12,005

D $1,250

*** Correct answer (B)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	24	
B*	56	
C	3	
D	16	

Error Analysis
☐Guessing
☐Careless Error
☐Stopped too Early
☐Mixed Up Concepts

Implications for Instruction/Notes

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IQ Analysis | Investigating the Question	SE 4.4(C)	RC: 2
4.4(C) represent the product of 2 two-digit numbers using arrays, area models, or equations, including perfect squares through 15 by 15	**Units:**	

No test questions 2013 – 2015

IQ Analysis | Investigating the Question	SE 4.4(D)	RC: 2
4.4(D)	**Units:**	

4.4(D) (New) use strategies and algorithms, including the standard algorithm, to multiply up to a four-digit number by a one-digit number and to multiply a two-digit number by a two-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties

4.4(D) (Old) use multiplication to solve problems (no more than two digits times two digits without technology

2014 – 14

There are 990 football players on high school teams in a city. Each team has the same number of players. Which group of teams could **NOT** describe the teams of football players in this city?

F 45 teams with 22 players on each team

G 27 teams with 70 players on each team

H 33 teams with 30 players on each team

J 18 teams with 55 players on each team

*** Correct answer (G)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	21	
G*	51	
H	14	
J	14	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.4(D) (New) use strategies and algorithms, including the standard algorithm, to multiply up to a four-digit number by a one-digit number and to multiply a two-digit number by a two-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties

4.4(D) (Old) use multiplication to solve problems (no more than two digits times two digits without technology

2013 – Q13

The list below shows the number of picture frames Shelly sold on each day of an art sale.

- She sold 16 picture frames on Thursday.
- She sold 22 picture frames on Friday.
- She sold 25 picture frames on Saturday.

The cost of each picture frame was $14. What was the total cost of these picture frames in dollars?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

*** Correct answer (882)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local	Error Analysis
882	44		☐Guessing ☐Careless Error ☐Stopped too Early ☐Mixed Up Concepts
	56		
	0		
	0		

Implications for Instruction/Notes

4.4(D) (New) use strategies and algorithms, including the standard algorithm, to multiply up to a four-digit number by a one-digit number and to multiply a two-digit number by a two-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties

4.4(D) (Old) use multiplication to solve problems (no more than two digits times two digits without technology

2013 – Q39

There are 39 containers of water for the students at a race. Each container holds 24 quarts of water. How many quarts of water are in the 39 containers?

A 234 qt

B 936 qt

C 1,026 qt

D 836 qt

*** Correct answer (B)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local	Error Analysis
A	13		☐Guessing ☐Careless Error ☐Stopped too Early ☐Mixed Up Concepts
B*	68		
C	7		
D	11		

Implications for Instruction/Notes

4.4(D) (New) use strategies and algorithms, including the standard algorithm, to multiply up to a four-digit number by a one-digit number and to multiply a two-digit number by a two-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties

5.3(B) (Old) use multiplication to solve problems involving whole numbers (no more than three digits times two digits without technology)

2013 – Q47

On Monday 149 people each bought 1 CD at a music store. On Tuesday 263 people each bought 1 CD. All the CDs cost $9. What was the total amount paid for the CDs on these two days?

A $3,608

B $1,341

C $2,367

D $3,708

*** Correct answer (D)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	11	
B	7	
C	9	
D*	72	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.4(E) **Units:**

4.4(E) (New) represent the quotient of up to a four-digit whole number divided by a one-digit whole number using arrays, area models, or equations

4.4(E) (Old) use division to solve problems (no more than one-digit divisors and three-digit dividends without technology

2013 – Q9

Terrell spent $306 on a television and 3 video games. He spent $243 on the television. Each video game was the same price. How much did Terrell spend on each video game?

A $21, because $306 - 243 = 63$ and $63 \div 3 = 21$

B $1,647, because $306 + 243 = 549$ and $549 \times 3 = 1,647$

C $183, because $306 + 243 = 549$ and $549 \div 3 = 183$

D $189, because $306 - 243 = 63$ and $63 \times 3 = 189$

*** Correct answer (A)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(G)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	73	
B	7	
C	9	
D	10	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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IQ Analysis | Investigating the Question	SE 4.4(F)	RC: 2
4.4(F)	**Units:**	

4.4(F) (New) use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor

4.4(E) (Old) use division to solve problems (no more than one-digit divisors and three-digit dividends without technology use division to solve problems (no more than one-digit divisors and three-digit dividends without technology

2014 – Q20

Isaiah put 301 floor tiles in 7 rows. Each row had the same number of tiles. How many tiles did Isaiah put in each row?

F 43

G 41

H 42

J 40

*** Correct answer (F)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F*	78	
G	7	
H	8	
J	6	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.4(F) (New) use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor

5.3(C) (Old) use division to solve problems involving whole numbers (no more than two-digit divisors and three-digit dividends without technology), including interpreting the remainder within a given context

2014 – Q24

A water dispenser contains 512 fluid ounces of water. What is the total number of 8-fluid-ounce cups of water that can be filled from the dispenser?

F 611

G 64

H 4,096

J 61

*** Correct answer (G)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	5	
G*	74	
H	16	
J	5	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.4(F) (New) use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor

4.4(E) (Old) use division to solve problems (no more than one-digit divisors and three-digit dividends without technology use division to solve problems (no more than one-digit divisors and three-digit dividends without technology

2013 – Q24

The picture below shows the number of prizes that were in 5 treasure chests.

54 prizes | 31 prizes | 47 prizes | 64 prizes | 56 prizes

Mr. Washington opened the chests and put all the prizes into 7 equal groups. How many prizes did Mr. Washington put into each group?

F 34

G 1,764

H 36

J 252

*** Correct answer (H)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	13	
G	4	
H*	54	
J	28	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

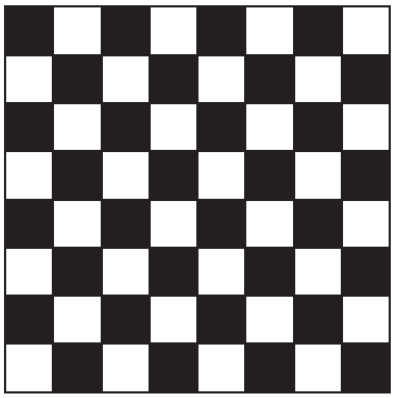
IQ Analysis | Investigating the Question	SE 4.4(G)	RC: 2
4.4(G)	**Units:**	

4.4(G) (New) round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers

5.4(A) (Old) use strategies, including rounding and compatible numbers to estimate solutions to addition, subtraction, multiplication, and division problems

2014 – Q20

Yuan has a game board like the one shown below.



Which of the following is the best estimate of the number of black squares that are on 188 of these game boards?

F 4,000

G 3,000

H 2,500

J 6,000

*** Correct answer (J)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	6	
G	10	
H	9	
J*	75	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.4(G) (New) round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers

8.2(C) (Old) evaluate a solution for reasonableness

2014 – Q33

A baseball coach bought some bats and gloves for the school's baseball team. The bats cost $20 to $35, and the gloves cost $30 to $60. Which of these does NOT represent a reasonable total purchase price for 15 bats and 12 gloves?

A $1,350

B $890

C $1,200

D $705

*** Correct answer (A)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	**57**	
B	**8**	
C	**7**	
D	**26**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.4(G) (New) round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers

4.5(A) (Old) round whole numbers to the nearest ten, hundred, or thousand to approximate reasonable results in problem situations

2014 – Q44

The number of worker bees in two bee colonies is shown below.

- Colony A has 24,815 worker bees.
- Colony B has 7,144 worker bees.

Which of the following is the best estimate of the difference between the number of worker bees in these colonies?

F 23,000

G 18,000

H 13,000

J 16,000

*** Correct answer (G)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	**12**	
G*	**58**	
H	**16**	
J	**12**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.4(G) (New) round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers

4.5(B) (Old) use strategies including rounding and compatible numbers to estimate solutions to multiplication and division problems

2013 – Q27

Nathan washes 26 cars each day he works at a car wash. He worked 34 days during the summer. About how many cars did Nathan wash during these 34 days?

A 900

B 600

C 1,800

D 1,200

*** Correct answer ()**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	70	
B	18	
C	6	
D	6	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

IQ Analysis | Investigating the Question

SE 4.4(H) **RC: 2**

4.4(H) **Units:**

4.4(H) solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders

2015 – Sample Q11

11 Kareem will use beads to make bracelets. He has 475 beads and needs to use 9 beads for each bracelet. What is the greatest number of bracelets Kareem can make with 475 beads?

A 52

B 49

C 45

D 53

*** Correct answer (A)**

Analysis of Assessed Standards

Multi Coding	**Content**	Readiness
	Process	4.1(A), 4.1(B), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	NA	
B		
C		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.4(H) (New) solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders

5.3(B) (Old) use multiplication to solve problems involving whole numbers (no more than three digits times two digits without technology)

2014 – Q1

The table below shows the prices of different movie tickets.

Movie Ticket Prices

Type of Movie	Adult Ticket	Child Ticket
General admission	$10	$7
Matinee	$8	$7
Special event	$14	$12
3-D	$13	$10

Mr. Gallego bought 2 adult tickets and 4 child tickets for his family and paid a total of $66. For which type of movie are Mr. Gallego's tickets?

A General admission

B Matinee

C Special event

D 3-D

*** Correct answer (D)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	**2**	
B	**4**	
C	**7**	
D*	**87**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.4(H) (New) solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders

4.4(C) (Old) recall and apply multiplication facts through 12 x 12

2014 – Q26

Zenobia put 3 large pictures and 4 small pictures on each page of a photo album. What is the total number of large pictures and small pictures on 9 pages of the album?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

*** Correct answer (63)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
63	**51**	
	48	
	0	
	0	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.4(H) (New) solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders

4.4(D) (Old) use multiplication to solve problems (no more than two digits times two digits without technology

2014 – Q37

Each of 16 students in a class made a poetry book. Each book contained 24 poems. How many poems are in 16 books?

A 484

B 364

C 384

D 168

*** Correct answer (C)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	7	
B	7	
C*	78	
D	7	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.4(H) (New) solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders

4.4(E) (Old) use division to solve problems (no more than one-digit divisors and three-digit dividends without technology

2014 – Q40

Isabel has 745 strawberries. She separated the strawberries into 5 equal groups. How many strawberries are in 2 of the groups?

F 202, because $745 \div 5 = 101$ and $101 \times 2 = 202$

G 282, because $745 \div 5 = 141$ and $141 \times 2 = 282$

H 298, because $745 \div 5 = 149$ and $149 \times 2 = 298$

J 290, because $745 \div 5 = 145$ and $145 \times 2 = 290$

*** Correct answer (H)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(G)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	13	
G	12	
H*	65	
J	9	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.4(H) (New) solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders

5.3(B) (Old) use multiplication to solve problems involving whole numbers (no more than three digits times two digits without technology)

2013 – Q24

There are four times as many cows as horses on a farm. There are twice as many horses as pigs on the farm. Which list shows the number of each type of animal on this farm?

F 9 cows, 36 horses, and 18 pigs

G 48 cows, 12 horses, and 24 pigs

H 32 cows, 16 horses, and 8 pigs

J 72 cows, 18 horses, and 9 pigs

*** Correct answer (J)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	**15**	
G	**20**	
H	**17**	
J*	**47**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.4(H) (New) solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders

4.4(E) (Old) use division to solve problems (no more than one-digit divisors and three-digit dividends without technology

2013 – Q41

Oscar used a total of 315 blocks to make 5 towers. He used an equal number of blocks to make each tower. How many blocks did Oscar use to make each tower?

A 65

B 63

C 61

D 79

*** Correct answer (B)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	**10**	
B*	**75**	
C	**8**	
D	**6**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

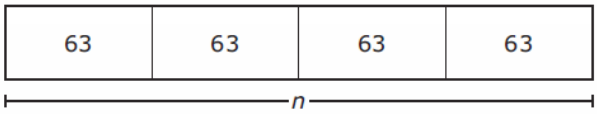
Implications for Instruction/Notes

4.5(A) represent multi-step problems involving the four operations with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity

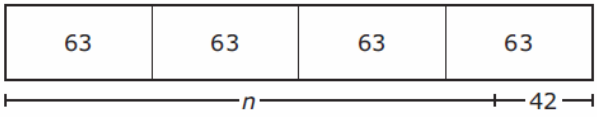
2015 – Sample Q12

12 Madeline has 4 rolls of tape. Each roll contains 63 inches of tape. Madeline used 42 inches of tape for a project. Which diagram shows a way to find n, the number of inches of tape that Madeline has left?

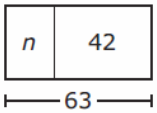
A



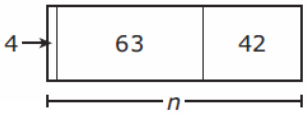
B



C



D



*** Correct answer (B)**

Analysis of Assessed Standards

Multi Coding	**Content**	Readiness
	Process	4.1(A), 4.1(B), 4.1(D), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B*		
C		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.5(B) represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence

2015 – Sample Q13

13 The table shows a relationship between the input numbers and the output numbers generated by a number machine.

Number Machine

Input	Output
1	79
2	80
3	81
4	82

Which number machine shows the same relationship as the one shown in the table?

A Input → +1 → Output

B Input → ×40 → Output

C Input → +78 → Output

D Input → ×79 → Output

*** Correct answer (C)**

Analysis of Assessed Standards

Multi Coding	**Content**	Readiness
	Process	4.1(B), 4.1(D), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B		
C*		
D		

Error Analysis
☐ Guessing
☐ Careless Error
☐ Stopped too Early
☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.5(B) (New) represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence

4.7(A) (Old) describe the relationship between two sets of related data such as ordered pairs in a table

2014 – Q7

Adam puts the same number of cherry tomatoes on each salad he makes in his restaurant. The table below shows the number of cherry tomatoes in different numbers of salads.

Salads

Number of Salads	25	35	50	100
Number of Cherry Tomatoes	125	175	250	500

Which statement describes the relationship between the number of salads and the number of cherry tomatoes?

A The number of salads $\times 4$ = the number of cherry tomatoes

B The number of salads $+ 10$ = the number of cherry tomatoes

C The number of salads $\times 5$ = the number of cherry tomatoes

D The number of salads $+ 100$ = the number of cherry tomatoes

*** Correct answer (C)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	**3**	
B	**2**	
C*	**89**	
D	**6**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.5(B) (New) represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence

3.7(B) (Old) identify and describe patterns in a table of related number pairs based on a meaningful problem and extend the table

2014 – Q8

The table below shows the relationship between the number of red stars and the number of white stars Adyssen drew on different posters.

Posters

Number of White Stars	7	10		19
Number of Red Stars	28	31	35	40

Based on the pattern in the table, which number sentence can be used to find the number of white stars Adyssen drew if she drew 35 red stars on a poster?

F $19 - 10 = 9$

G $35 - 21 = 14$

H $7 + 10 = 17$

J $10 + 3 = 13$

*** Correct answer (G)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(E)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	6	
G*	52	
H	18	
J	24	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.5(B) (New) represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence

4.7(A) (Old) describe the relationship between two sets of related data such as ordered pairs in a table

2014 – Q21

The table below shows the relationship between the number of cars and the number of trucks at a car dealership on different days.

Car Dealership

Number of Trucks	Number of Cars
78	110
95	127
83	115
72	104
91	123

Which statement describes the relationship between the number of cars and the number of trucks at the dealership?

A The number of cars + 17 = the number of trucks

B The number of cars − 32 = the number of trucks

C The number of cars − 17 = the number of trucks

D The number of cars + 32 = the number of trucks

*** Correct answer (B)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	4	
B*	51	
C	4	
D	41	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.5(B) (New) represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence

3.7(B) (Old) identify and describe patterns in a table of related number pairs based on a meaningful problem and extend the table

2014 – Q45

The table below shows the number of airplanes that landed in different numbers of hours at an airport.

Airport

Number of Hours	Number of Airplanes
2	20
5	50
9	
10	100

The same number of airplanes landed each hour. How many airplanes landed in 9 hours at the airport?

A 80, because $50 + 30 = 80$

B 45, because $9 \times 5 = 45$

C 90, because $9 \times 10 = 90$

D 50, because $100 - 50 = 50$

*** Correct answer (C)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(G)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	19	
B	4	
C*	74	
D	2	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.5(B) (New) represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence

4.7(A) (Old) describe the relationship between two sets of related data such as ordered pairs in a table

2013 – Q6

A number sentence is shown below.

$$\square \times 25 = \bigcirc$$

Which table shows numbers that correctly complete the number sentence?

F

□	3	5	7	9
○	75	125	175	200

H

□	3	5	7	9
○	75	100	125	150

G

□	3	5	7	9
○	25	50	75	100

J

□	3	5	7	9
○	75	125	175	225

*** Correct answer (J)**

Analysis of Assessed Standards

Dual Coding	Content	Readiness
	Process	

Stimulus	
Thinking	
Related SEs	

Data Analysis

Item	State	Local
F	8	
G	12	
H	5	
J*	76	

Error Analysis
☐ Guessing
☐ Careless Error
☐ Stopped too Early
☐ Mixed Up Concepts

Implications for Instruction/Notes

4.5(B) (New) represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence

4.7(A) (Old) describe the relationship between two sets of related data such as ordered pairs in a table

2013 – 20

20 The table below shows the amount of money Hector earned and spent during each of four months.

Hector's Money

Month	Amount Earned	Amount Spent
May	$27	$12
June	$39	$24
July	$46	$31
August	$43	$28

Which of the following describes the relationship in the table?

F Amount spent + 12 = amount earned

G Amount spent × 2 = amount earned

H Amount spent + 15 = amount earned

J Amount spent − 15 = amount earned

*** Correct answer (H)**

Analysis of Assessed Standards

Dual Coding	Content	Readiness
	Process	4.1(F)

Stimulus	
Thinking	
Related SEs	

Data Analysis

Item	State	Local
F	6	
G	5	
H*	48	
J	41	

Error Analysis
☐ Guessing
☐ Careless Error
☐ Stopped too Early
☐ Mixed Up Concepts

Implications for Instruction/Notes

4.5(B) (New) represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence

4.7(A) (Old) describe the relationship between two sets of related data such as ordered pairs in a table

2013 – Q33

The table below shows the total number of computers in different numbers of classrooms in a school.

School Computers

Total Number of Computers	Number of Classrooms
105	15
84	12
42	6
21	3

Which of the following describes the relationship in the table?

A Total number of computers − 19 = number of classrooms

B Total number of computers ÷ 3 = number of classrooms

C Total number of computers − 90 = number of classrooms

D Total number of computers ÷ 7 = number of classrooms

*** Correct answer (D)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	4	
B	10	
C	17	
D*	67	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.5(B) (New) represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence

4.7(A) (Old) describe the relationship between two sets of related data such as ordered pairs in a table

2013 – Q44

The table below shows two related sets of numbers.

△	○
60	20
45	15
33	11
9	3

Which of the following describes the relationship in the table?

F △ − 15 = ○

G △ ÷ 3 = ○

H △ − 40 = ○

J △ ÷ 6 = ○

*** Correct answer (G)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	4	
G*	69	
H	19	
J	7	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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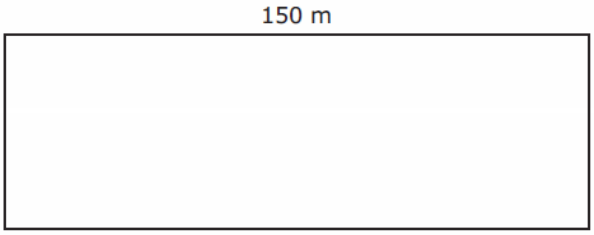
4.5(D) solve problems related to perimeter and area of rectangles where dimensions are whole numbers

2015 – Sample Q14

14 The model shows a rectangular field with a length of 150 m. The perimeter of the field is 400 m.



What is the width of the field in meters?

A 250 m

B 100 m

C 125 m

D 50 m

*** Correct answer (D)**

Analysis of Assessed Standards

Multi Coding	**Content**	Readiness
	Process	4.1(A), 4.1(B), 4.1(C), 4.1(E), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local	Error Analysis
A	NA		☐Guessing ☐Careless Error ☐Stopped too Early ☐Mixed Up Concepts
B			
C			
D*			

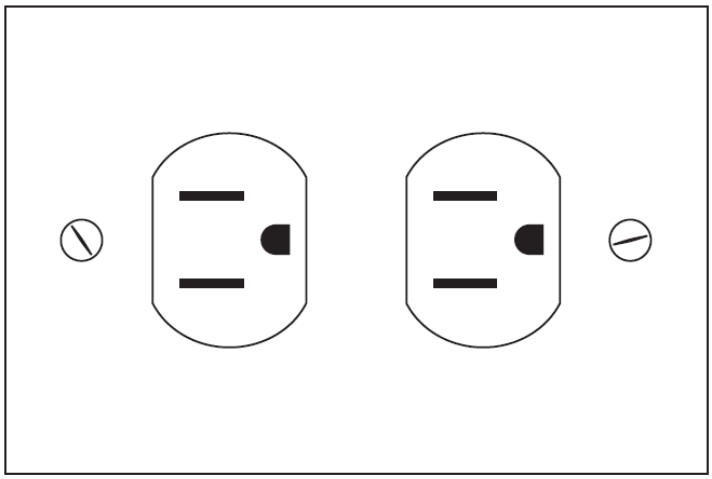
Implications for Instruction/Notes

4.5(D) (New) solve problems related to perimeter and area of rectangles where dimensions are whole numbers

5.10(C) (Old) select and use appropriate units and formulas to measure length, perimeter, area, and volume

2014 – Q2

Kacey bought a rectangular wall plate for an electrical outlet. A picture of the wall plate is shown below. Use the ruler provided to measure the dimensions of the wall plate to the nearest centimeter.



Which measurement is closest to the perimeter, in centimeters, of the wall plate?

F 44 cm

G 96 cm

H 40 cm

J 20 cm

*** Correct answer (H)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	**3**	
G	**5**	
H*	**88**	
J	**4**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

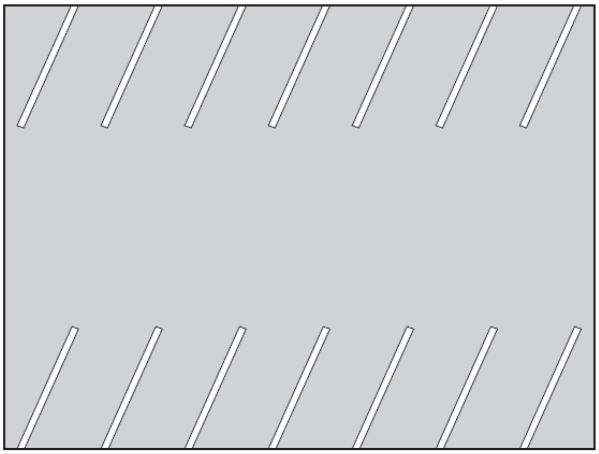
Implications for Instruction/Notes

4.5(D) (New) solve problems related to perimeter and area of rectangles where dimensions are whole numbers

5.10(C) (Old) select and use appropriate units and formulas to measure length, perimeter, area, and volume

2014 – Q17

A rectangular parking lot is represented by the scale drawing below. Use the ruler provided to measure the length and width of the rectangle to the nearest inch.



SCALE
1 inch represents 20 feet.

Which measurement is closest to the area, in square feet, of the actual parking lot?

A 8,000 square feet

B 360 square feet

C 4,800 square feet

D 280 square feet

*** Correct answer (C)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	**3**	
B	**6**	
C*	**50**	
D	**41**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.5(D) (New) solve problems related to perimeter and area of rectangles where dimensions are whole numbers

5.10(C) (Old) select and use appropriate units and formulas to measure length, perimeter, area, and volume

2014 – Q33

The side length of a square is 20 millimeters. Which statement about this square is true?

A The perimeter of the square is 400 millimeters, because $20 \times 20 = 400$.

B The perimeter of the square is 80 millimeters, because $20 \times 4 = 80$.

C The area of the square is 40 square millimeters, because $20 \times 2 = 40$.

D The area of the square is 80 square millimeters, because $20 \times 4 = 80$.

*** Correct answer (B)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(G)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	12	
B*	62	
C	12	
D	13	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

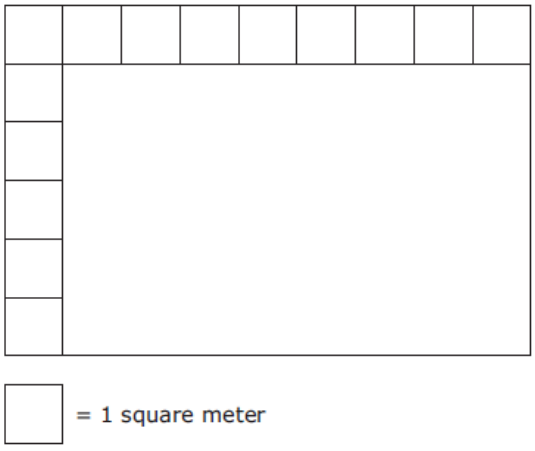
Implications for Instruction/Notes

4.5(D) (New) solve problems related to perimeter and area of rectangles where dimensions are whole numbers

4.11(A) (Old) estimate and use measurement tools to determine length (including perimeter), area, capacity and weight/mass using standard units SI (metric) and customary

2013 – Q3

The model below represents the length and width of a rectangular exercise mat.



= 1 square meter

What is the area of this mat in square meters?

A 15 square meters

B 45 square meters

C 54 square meters

D 30 square meters

*** Correct answer (C)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	8	
B	6	
C*	80	
D	6	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

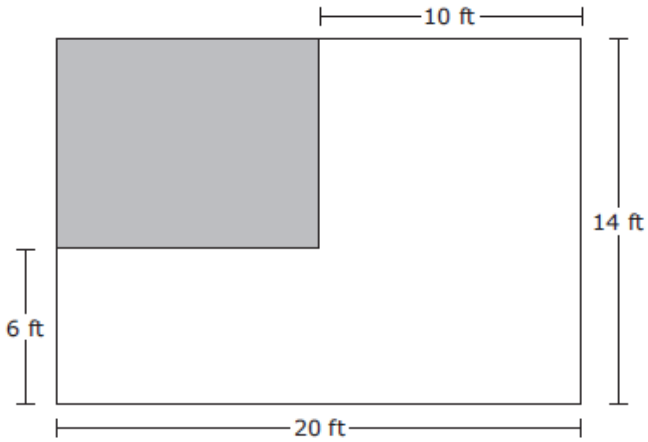
Implications for Instruction/Notes

4.5(D) (New) solve problems related to perimeter and area of rectangles where dimensions are whole numbers

5.10(C) (Old) select and use appropriate units and formulas to measure length, perimeter, area, and volume

2013 – Q16

Harman is painting a rectangular wall. He has already painted the rectangular shaded section, as shown below.



What is the area of the shaded section Harman has already painted?

F 80 square feet

G 140 square feet

H 56 square feet

J 280 square feet

*** Correct answer (F)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F*	58	
G	14	
H	16	
J	12	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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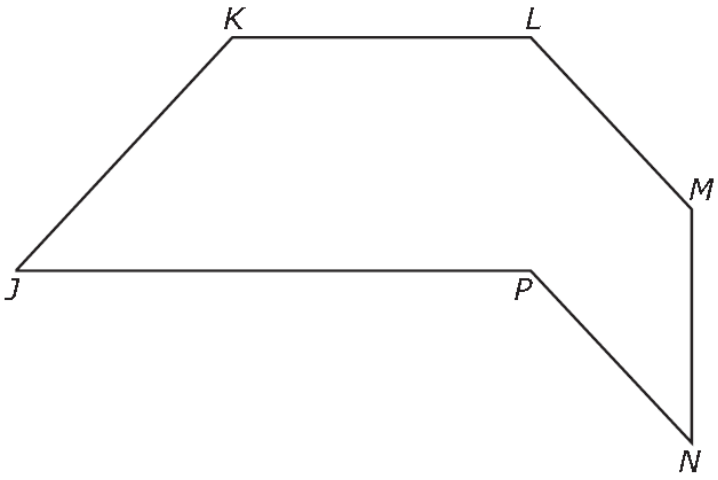
4.6(A) (New) identify points, lines, line segments, rays, angles, and perpendicular and parallel lines

4.8(B) (Old) identify and describe parallel and intersecting (including perpendicular) lines using concrete objects and pictorial models

2014 – Q15

A figure is shown below.



Which two line segments appear to be parallel?

A Line segments *LM* and *NP*

B Line segments *MN* and *NP*

C Line segments *JK* and *JP*

D Line segments *KL* and *LM*

*** Correct answer (A)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	71	
B	10	
C	11	
D	8	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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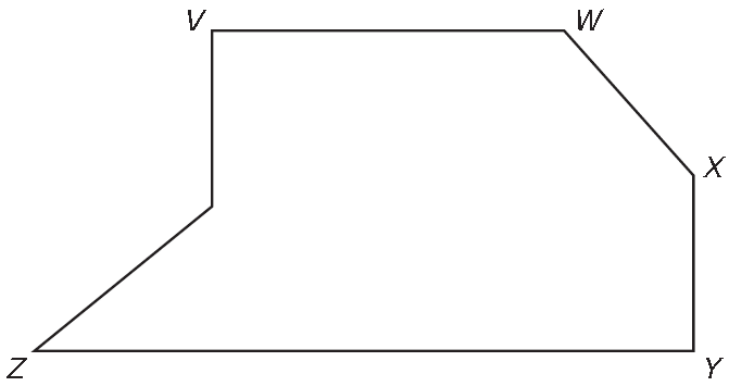
4.6(A) (New) identify points, lines, line segments, rays, angles, and perpendicular and parallel lines

4.8(A) (Old) identify and describe right, acute, and obtuse angles

2014 – Q38

Five angles are labeled on the figure shown below.



The labeled angles appear to be —

F 1 acute angle, 1 right angle, and 3 obtuse angles

G 2 acute angles, 2 right angles, and 1 obtuse angle

H 1 acute angle, 2 right angles, and 2 obtuse angles

J 2 acute angles, 1 right angle, and 2 obtuse angles

*** Correct answer (H)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	11	
G	9	
H*	74	
J	5	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

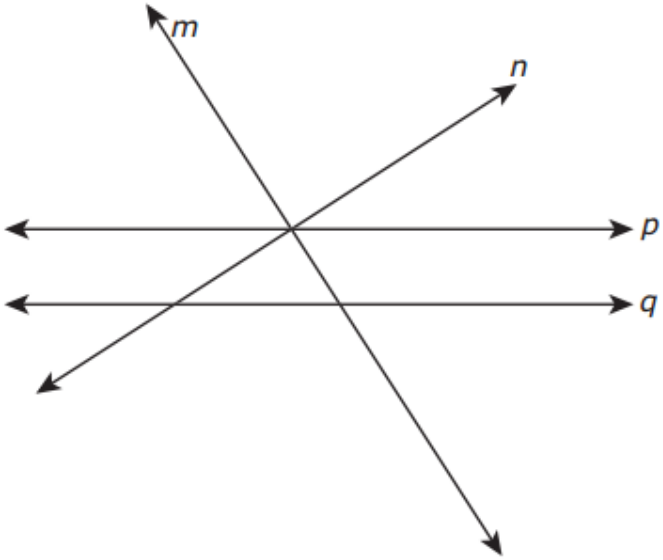
© 2015 lead4ward

4.6(A) (New) identify points, lines, line segments, rays, angles, and perpendicular and parallel lines

4.8(B) (Old) identify and describe parallel and intersecting (including perpendicular) lines using concrete objects and pictorial models

2013 – Q12

12 A group of lines is shown below.



Which two lines appear to be perpendicular?

F Lines *m* and *p*

G Lines *p* and *q*

H Lines *m* and *n*

J Lines *n* and *q*

*** Correct answer (H)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	7	
G	16	
H*	72	
J	4	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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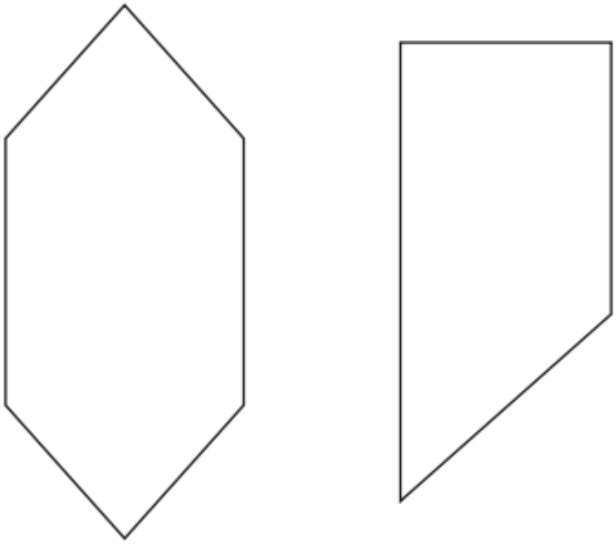
4.6(A) (New) identify points, lines, line segments, rays, angles, and perpendicular and parallel lines

5.7(A) (Old) identify essential attributes including parallel, perpendicular, and congruent parts of two- and three-dimensional geometric figures

2013 – Q38

38 Two figures are shown below.



Which statement about these two figures appears to be true?

F There are a total of 5 acute angles.

G There are a total of 5 obtuse angles.

H There are a total of 2 acute angles.

J There are a total of 2 obtuse angles.

*** Correct answer (G)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	5.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	6	
G*	62	
H	19	
J	12	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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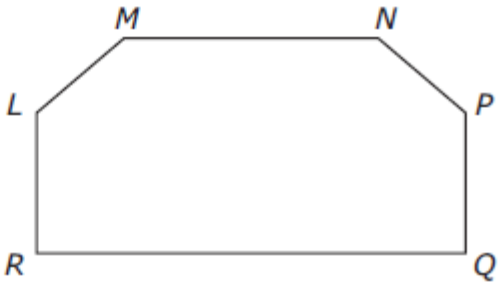
4.6(A) (New) identify points, lines, line segments, rays, angles, and perpendicular and parallel lines

4.8(A) (Old) identify and describe right, acute, and obtuse angles

2013 – Q42

The figure below has 6 labeled angles.



Which list shows only the angles that appear to be right angles?

F Angle *L*, angle *M*, angle *N*, and angle *P*

G Angle *L*, angle *P*, angle *Q*, and angle *R*

H Angle *Q* and angle *R*

J Angle *M* and angle *N*

*** Correct answer (H)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	**6**	
G	**18**	
H*	**74**	
J	**2**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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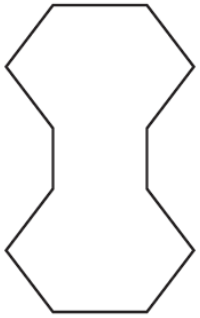
4.6(B) (New) identify and draw one or more lines of symmetry, if they exist, for a two-dimensional figure

4.9(C) (Old) use reflections to verify that a shape has symmetry

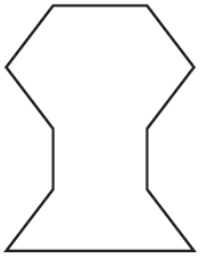
2014 – Q46

Which figure appears to have exactly 2 lines of symmetry?

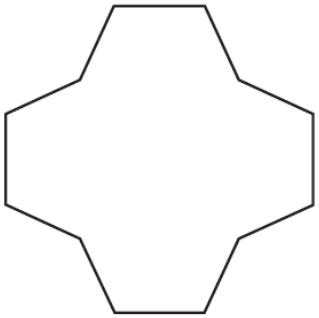
F



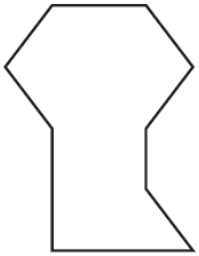
H



G



J



*** Correct answer (F)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F*	69	
G	21	
H	5	
J	4	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.6(C) (New) apply knowledge of right angles to identify acute, right, and obtuse triangles

6.6(A) (Old) use angle measurements to classify angles as acute, obtuse, or right

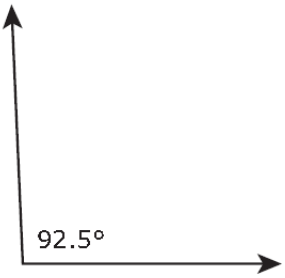
2014 – Q1

Bert drew an angle that has the characteristics listed below.

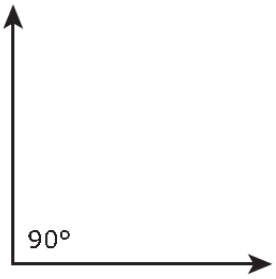
- It has a measure greater than 88.5°.
- It is an obtuse angle.

Which of the following could be the angle Bert drew?

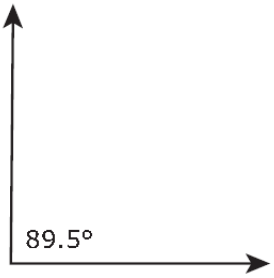
A



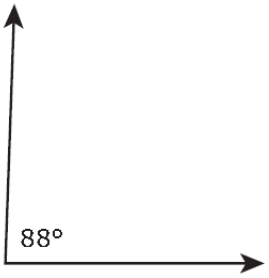
C



B



D



*** Correct answer (A)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	85	
B	7	
C	5	
D	3	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.6(C) (New) apply knowledge of right angles to identify acute, right, and obtuse triangles

6.6(A) (Old) use angle measurements to classify angles as acute, obtuse, or right

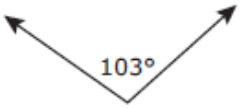
2013 – Q51

Danica drew an angle that has the characteristics listed below.

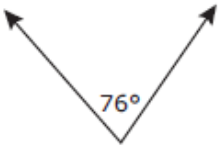
- Its measure is less than 108.5°.
- It is an acute angle.

Which of the following could be the angle Danica drew?

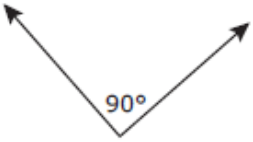
A



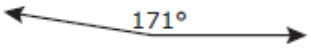
B



C



D



*** Correct answer (B)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	8	
B*	83	
C	7	
D	2	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.6(D) | **Units:**

4.6(D) classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size

2015 – Sample Q15

15 Which figure **cannot** have parallel line segments?

A Square

B Pentagon

C Triangle

D Trapezoid

*** Correct answer (C)**

Analysis of Assessed Standards

Multi Coding	**Content**	Readiness
	Process	4.1(B), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B		
C*		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.6(D) (New) classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size

4.8(C) (Old) use essential attributes to define two- and three-dimensional geometric figures

2014 – Q12

Which statement about a pentagon is true?

F It must have parallel sides.

G It must have more vertices than sides.

H It must have no right angles.

J It must have 5 sides.

*** Correct answer (J)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	13	
G	5	
H	10	
J*	71	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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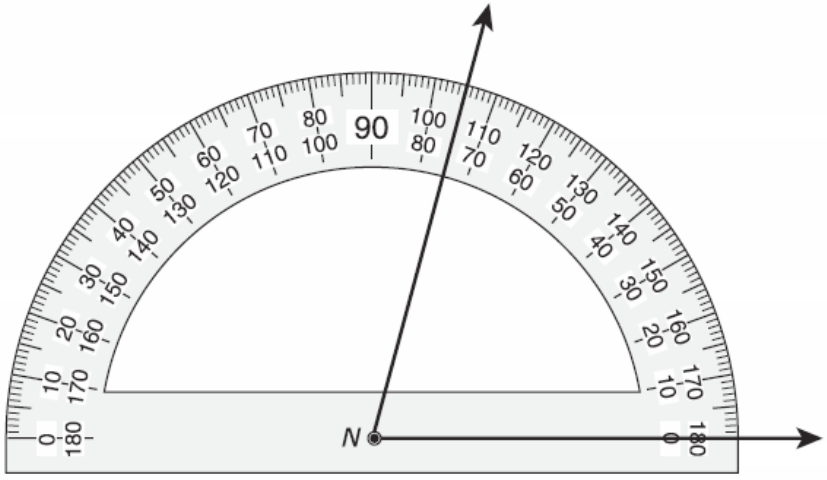
4.7(C) determine the approximate measures of angles in degrees to the nearest whole number using a protractor

2015 – Sample Q16

16 Angle *N* is shown on this protractor.



What is the measure of angle *N* to the nearest degree?

A 75°

B 105°

C 80°

D 180°

*** Correct answer (A)**

Analysis of Assessed Standards

Multi Coding	**Content**	Readiness
	Process	4.1(B), 4.1(C), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	NA	
B		
C		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

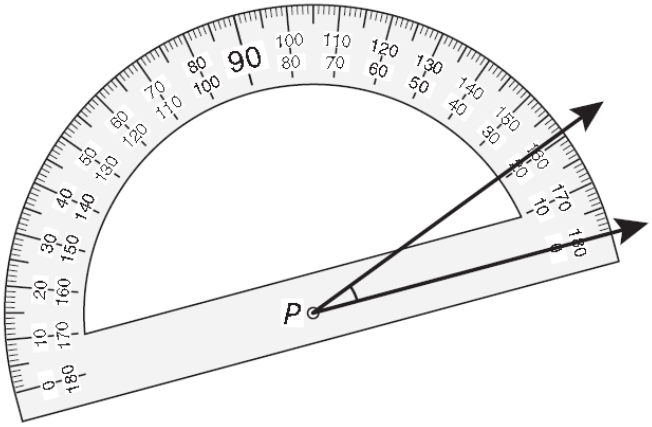
© 2015 lead4ward Source: Texas Education Agency STAAR™ Released Test Questions

4.7(C) (New) determine the approximate measures of angles in degrees to the nearest whole number using a protractor

6.8(C) (Old) measure angles

2014 – Q52

In the diagram below, what is the measure of angle *P* to the nearest degree?



F 21°

G 159°

H 39°

J 161°

*** Correct answer (F)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F*	**76**	
G	**12**	
H	**4**	
J	**8**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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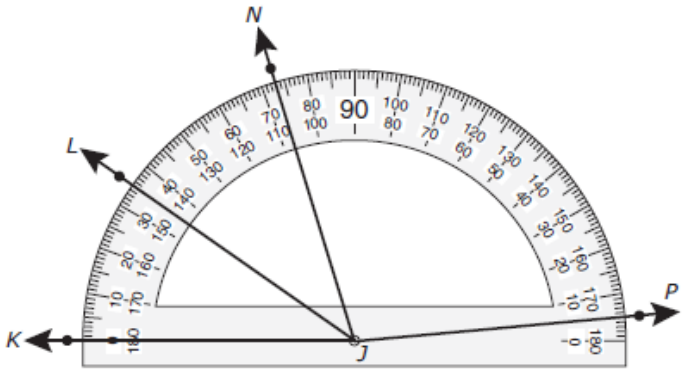
4.7(C) (New) determine the approximate measures of angles in degrees to the nearest whole number using a protractor

6.8(C) (Old) measure angles

2013 – Q14

Angle *NJP* and angle *KJL* are shown below.



What is the difference between the measures of angle *NJP* and angle *KJL* to the nearest degree?

F 107°

G 67°

H 102°

J 35°

*** Correct answer (G)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	**10**	
G*	**60**	
H	**10**	
J	**20**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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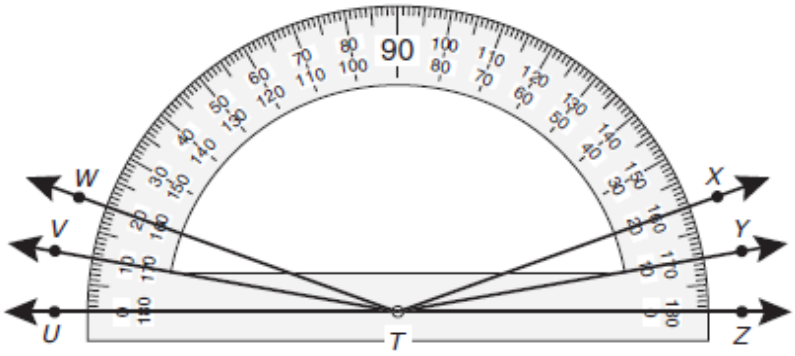
4.7(C) (New) determine the approximate measures of angles in degrees to the nearest whole number using a protractor

6.8(C) (Old) measure angles

2013 – Q35

Which angle does NOT appear to have a measure of 160°?



A ∠*VTY*

B ∠*WTZ*

C ∠*WTY*

D ∠*UTX*

*** Correct answer (C)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	30	
B	9	
C*	51	
D	8	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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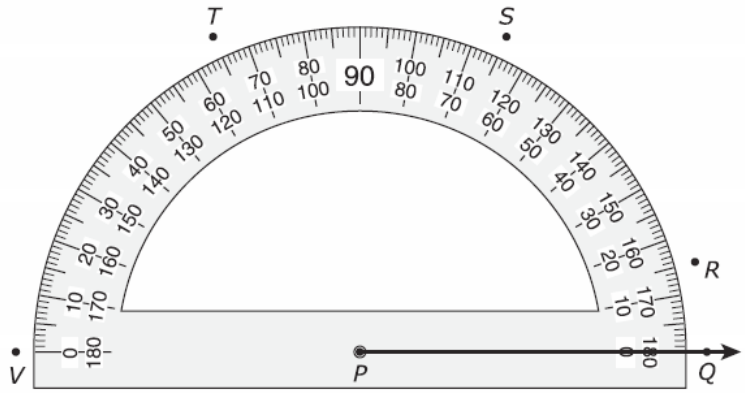
4.7(D) draw an angle with a given measure

2015 – Sample Q17

17 Frank is using a protractor to construct an angle that measures 65°. First he draws ray *PQ*, as shown on the protractor.



To complete the 65° angle, Frank should draw another ray that starts at point *P* and passes through —

A point *R*

B point *S*

C point *T*

D point *V*

*** Correct answer (B)**

Analysis of Assessed Standards

Multi Coding	**Content**	Supporting
	Process	4.1(A), 4.1(B), 4.1(C), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B*		
C		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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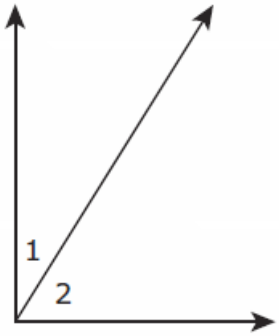
4.7(E) determine the measure of an unknown angle formed by two non-overlapping adjacent angles given one or both angle measures

2015 – Sample Q18

18 Angle 1 and angle 2 form a right angle.



The measure of angle 1 is 32°. What is the measure of angle 2?

A 32°

B 90°

C 58°

D 62°

*** Correct answer (C)**

Analysis of Assessed Standards

Multi Coding	**Content**	Supporting
	Process	4.1(B), 4.1(E), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B		
C*		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.8(A) **Units:**

4.8(A) (New) identify relative sizes of measurement units within the customary and metric systems

4.11(A) (Old) estimate and use measurement tools to determine length (including perimeter), area, capacity and weight/mass using standard units SI (metric) and customary

2014 – Q41

Which of these is closest to the width of a student's chair?

A 15 feet

B 15 yards

C 15 miles

D 15 inches

*** Correct answer (D)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	18	
B	3	
C	1	
D*	77	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

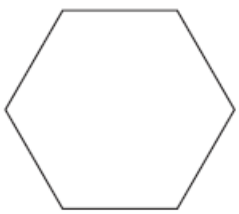
Implications for Instruction/Notes

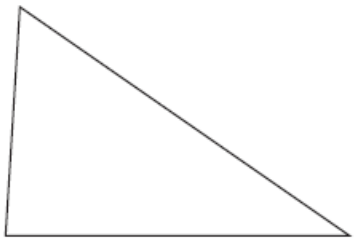
4.8(A) (New) identify relative sizes of measurement units within the customary and metric systems

4.11(A) (Old) estimate and use measurement tools to determine length (including perimeter), area, capacity and weight/mass using standard units SI (metric) and customary

2013 – Q10

Use the ruler provided to measure the side lengths of the figures below to the nearest centimeter.





What is the difference between the perimeters of these figures?

F 2 cm

G 9 cm

H 29 cm

J 5 cm

*** Correct answer (J)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	7	
G	5	
H	15	
J*	74	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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IQ Analysis | Investigating the Question	SE 4.8(B)	RC: 3
4.8(B) convert measurements within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table	**Units:**	

No test questions 2013 – 2015

IQ Analysis | Investigating the Question	SE 4.8(C)	RC: 3
4.8(C)	**Units:**	

4.8(C) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

2015 – Sample Q19

19 Vivian had a $5 bill, 3 quarters, 2 dimes, and 5 nickels. She paid for a poster that cost $5.36. How much money does she have left?

A $1.16

B $0.84

C $6.20

D $0.04

*** Correct answer (B)**

Analysis of Assessed Standards

Multi Coding	**Content**	Readiness
	Process	4.1(A), 4.1(B), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B*		
C		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

4.11(A) (Old) estimate and use measurement tools to determine length (including perimeter), area, capacity and weight/mass using standard units SI (metric) and customary

2014 – Q4

Terrence drew a figure. Each side of the figure is the same length as the line segment below. Use the ruler provided to measure the line segment to the nearest inch.

This figure could be a —

F square with a perimeter of 6 inches

G triangle with a perimeter of 6 inches

H square with a perimeter of 12 inches

J triangle with a perimeter of 12 inches

*** Correct answer (H)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	**18**	
G	**11**	
H*	**68**	
J	**3**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

4.12(B) (Old) use tools such as a clock with gears or a stopwatch to solve problems involving elapsed time

2014 – Q5

The watch below shows the time Edward finished a hike on Saturday afternoon.

Edward began the hike on Saturday at 10:15 A.M. How long did he hike?

A 5 hours 20 minutes

B 6 hours 20 minutes

C 5 hours 40 minutes

D 7 hours 40 minutes

*** Correct answer (A)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	**55**	
B	**19**	
C	**12**	
D	**14**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

4.11(A) (Old) estimate and use measurement tools to determine length (including perimeter), area, capacity and weight/mass using standard units SI (metric) and customary

2014 – Q28

Which object has a capacity closest to 30 cups?

F

Tablespoon

H

Water bottle

G

Serving bowl

J

Cereal bowl

*** Correct answer (G)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	1	
G*	73	
H	12	
J	13	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

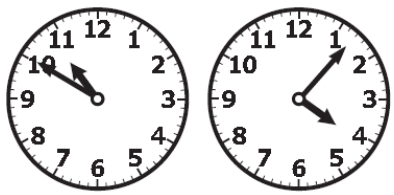
5.11(B) (Old) solve problems involving elapsed time

2014 – Q29

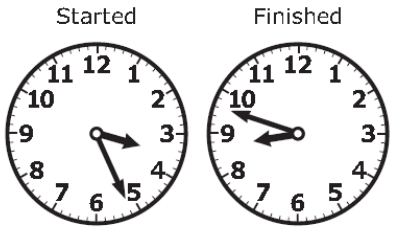
An airplane flight lasted 5 hours 22 minutes. Which pair of clocks could show the time the flight started and the time it finished?

A

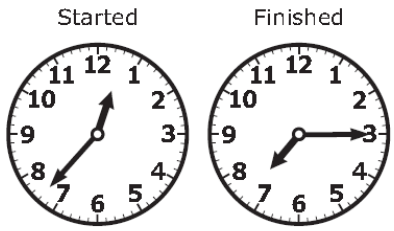
C



B



D



*** Correct answer (B)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	22	
B*	55	
C	13	
D	9	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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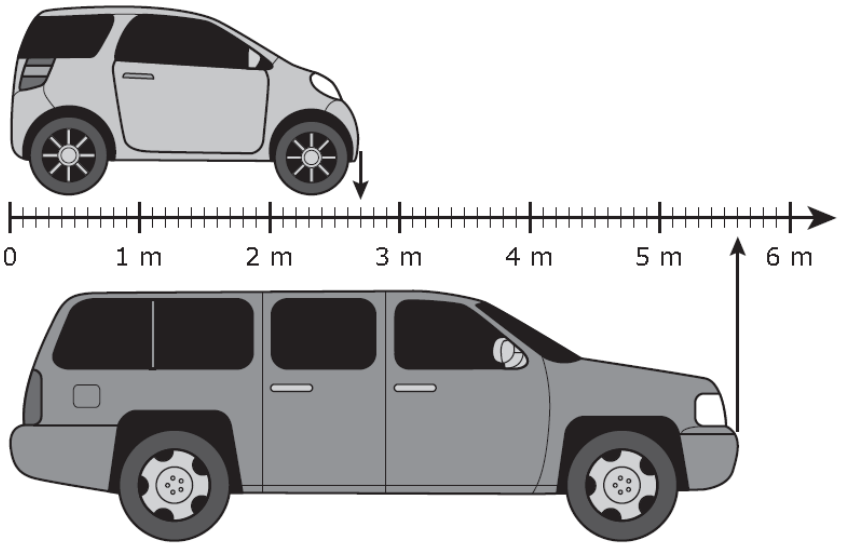
4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

4.3(B) (Old) add and subtract decimals to the hundredths place using concrete objects and pictorial models

2014 – Q30

The model below represents the lengths of two automobiles in meters.



What is the difference between the lengths of these automobiles in meters?

F 8.3 m

G 3.9 m

H 3.1 m

J 2.9 m

*** Correct answer (J)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	**10**	
G	**12**	
H	**16**	
J*	**62**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

4.11(A) (Old) estimate and use measurement tools to determine length (including perimeter), area, capacity and weight/mass using standard units SI (metric) and customary

2014 – Q32

The actual size of Sam's name tag is shown below.

Use the ruler provided to measure the length and width of this name tag to the nearest centimeter. What is the difference between the length and the width of Sam's name tag in centimeters?

F 5 cm

G 14 cm

H 9 cm

J 4 cm

*** Correct answer (J)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	**4**	
G	**16**	
H	**21**	
J*	**58**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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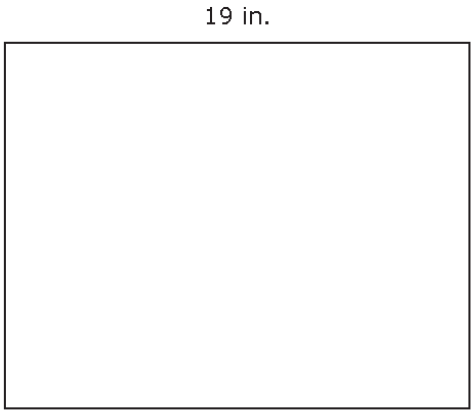
4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

3.11(B) (Old) use standard units to find the perimeter of a shape

2014 – Q34

Adam has 60 inches of ribbon. He wants to use the ribbon to make a border around the perimeter of a rectangular picture. The dimensions of the picture are shown below.



Does Adam have enough ribbon to make a border around this picture?

F No, because $19 + 19 + 15 + 15 = 68$, and $68 > 60$

G Yes, because $19 + 15 = 34$, and $60 > 34$

H No, because $19 + 19 + 19 + 19 = 76$, and $76 > 60$

J Yes, because $15 + 15 + 15 + 15 = 60$, and $60 = 60$

*** Correct answer (F)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(G)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F*	**75**	
G	**13**	
H	**3**	
J	**8**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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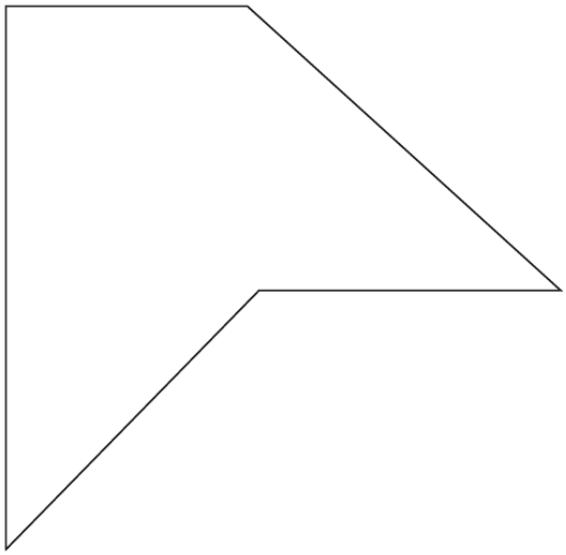
4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

3.11(B) (Old) use standard units to find the perimeter of a shape

2014 – Q44

Melinda drew the figure shown below. Use the ruler provided to measure the length of each side of the figure to the nearest centimeter.



What is the perimeter in centimeters of the figure Melinda drew?

F 45 cm

G 31 cm

H 36 cm

J 26 cm

*** Correct answer (G)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F	**5**	
G*	**78**	
H	**6**	
J	**9**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

6.8(B) (Old) select and use appropriate units, tools, or formulas to measure and to solve problems involving length (including perimeter), area, time, temperature, volume, and weight

2013 – Q8

8 Stephanie and Tamara both started running a race at 8:15 A.M. Stephanie finished the race in 4 hours 30 minutes. Tamara finished the race in 1 hour 15 minutes after Stephanie did. At what time did Tamara finish the race?

F 2:00 P.M.

G 12:45 P.M.

H 1:00 P.M.

J Not here

*** Correct answer (F)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	6.11(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F*	**61**	
G	**5**	
H	**10**	
J	**24**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

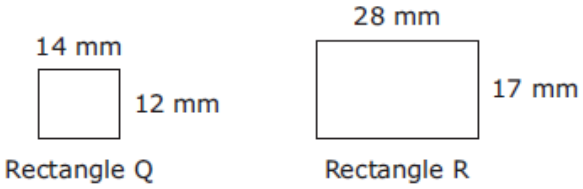
Implications for Instruction/Notes

4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

3.11(B) (Old) use standard units to find the perimeter of a shape

2013 – Q15

The dimensions of two rectangles are shown below.



Which statement about these rectangles is true?

A The perimeter of Rectangle Q is 19 millimeters less than the perimeter of Rectangle R.

B The perimeter of Rectangle Q is 38 millimeters less than the perimeter of Rectangle R.

C The perimeter of Rectangle Q is 14 millimeters less than the perimeter of Rectangle R.

D The perimeter of Rectangle Q is 42 millimeters less than the perimeter of Rectangle R.

*** Correct answer (B)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	3.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	**16**	
B*	**47**	
C	**17**	
D	**20**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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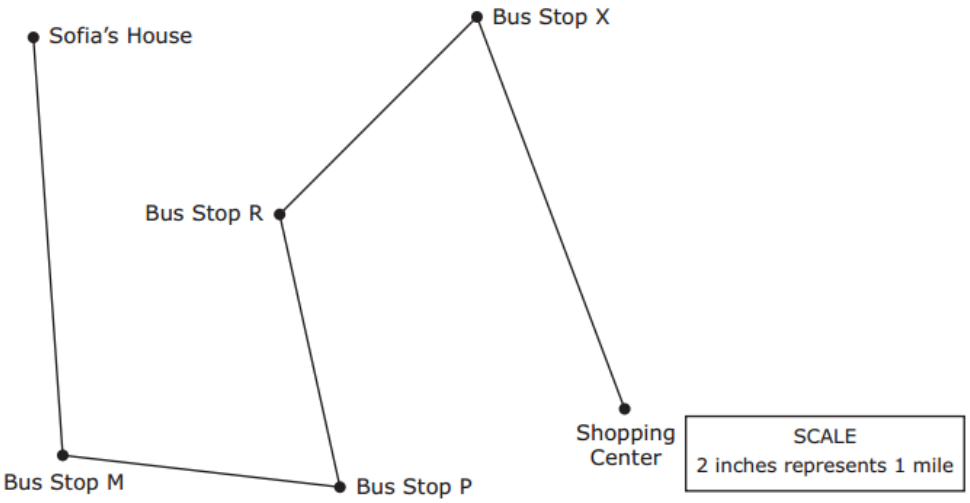
4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

5.10(C) (Old) select and use appropriate units and formulas to measure length, perimeter, area, and volume

2013 – Q21

21 The diagram below models the bus route Sofia takes to get from her house to a shopping center. Use the ruler provided to measure Sofia's route to the nearest inch.



If 2 inches in the drawing represents 1 mile, which distance is closest to the length of the actual bus route Sofia takes to get from her house to the shopping center?

A 24 mi

B 6 mi

C 5 mi

D 12 mi

*** Correct answer (B)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	5.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	6	
B*	60	
C	17	
D	17	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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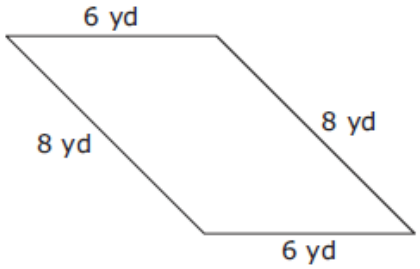
4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

3.11(B) (Old) use standard units to find the perimeter of a shape

2013 – Q27

The side lengths of Terry's sandbox are shown below.



Terry buys 30 yards of fence. Does he have enough fence to go completely around his sandbox?

A No, because $8 \times 4 = 32$ and $32 > 30$

B Yes, because $8 + 6 = 14$ and $14 < 30$

C No, because $8 \times 6 = 48$ and $48 > 30$

D Yes, because $8 + 6 + 8 + 6 = 28$ and $28 < 30$

*** Correct answer (D)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	3.1(G)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	**6**	
B	**9**	
C	**8**	
D*	**77**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

6.8(A) (Old) estimate measurements (including circumference) and evaluate reasonableness of results

2013 – Q32

32 At 7:26 A.M., Dante started delivering packages.

- At 10:34 A.M., he delivered the last package.
- He delivered a total of 18 packages.
- He spent about the same amount of time delivering each package.

Which of the following is the best estimate of the number of minutes Dante spent delivering each package?

F 10 min

G 180 min

H 60 min

J 20 min

*** Correct answer (F)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	6.11(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
F*	**47**	
G	**19**	
H	**8**	
J	**25**	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

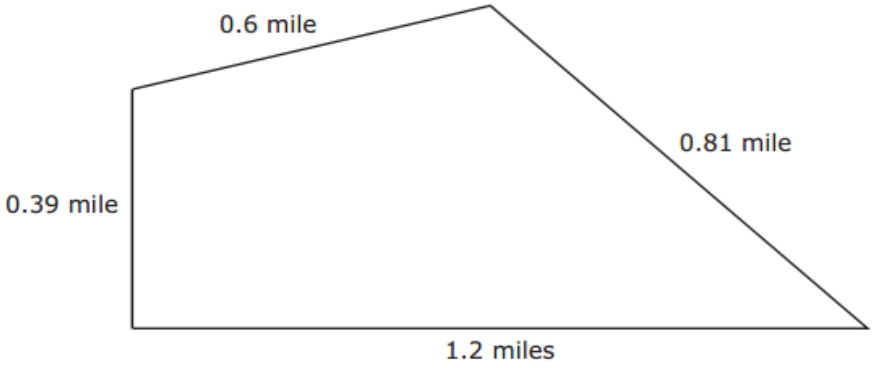
Implications for Instruction/Notes

4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

5.10(C) (Old) select and use appropriate units and formulas to measure length, perimeter, area, and volume

2013 – Q33

33 The side lengths of a field are shown below.



What is the perimeter of the field?

A 1.41 mi

B 3.18 mi

C 3 mi

D 2 mi

*** Correct answer (C)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	5	
B	12	
C*	75	
D	8	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

5.11(B) (Old) solve problems involving elapsed time

2013 – Q39

39 The sign below shows the starting time of a music concert.

Evander plans to leave his house 1 hour 40 minutes before the concert starts. At what time should Evander leave his house?

A 5:45 P.M.

B 6:45 P.M.

C 5:35 P.M.

D 9:05 P.M.

*** Correct answer (A)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(A)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	54	
B	29	
C	12	
D	5	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.8(C) (New) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate

4.12(B) (Old) use tools such as a clock with gears or a stopwatch to solve problems involving elapsed time

2013 – Q43

The clock below shows the time Vicente's football practice began.

Football practice lasted 1 hour 15 minutes. Which digital clock shows the time football practice ended?

A 

C 

B 

D 

*** Correct answer (A)**

Analysis of Assessed Standards

Dual Coding	**Content**	Readiness
	Process	4.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	83	
B	4	
C	5	
D	7	

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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4.9(A) represent data on a frequency table, dot plot, or stem-and-leaf plot marked with whole numbers and fractions

2015 – Sample Q20

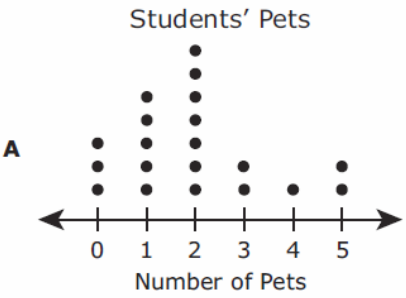
20 The table shows the number of pets that each student in Mrs. Morris's class owns.

Students' Pets

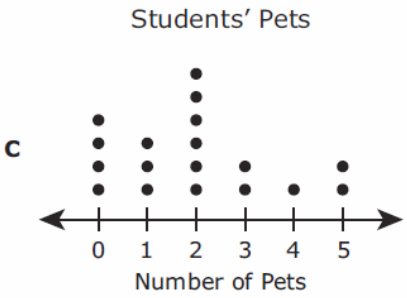
Number of Pets	Frequency
0	𝍸
1	III
2	𝍸 II
3	II
4	I
5	II

Which dot plot represents the data in the table?

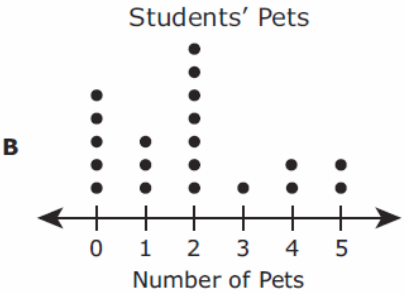
A



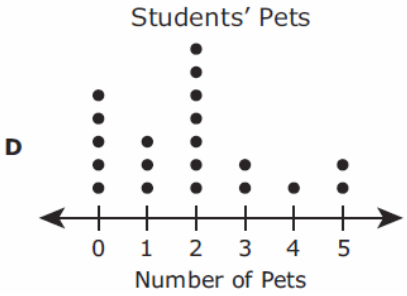
C



B



D



*** Correct answer (D)**

Analysis of Assessed Standards

Multi Coding	**Content**	Readiness
	Process	4.1(A), 4.1(B), 4.1(D), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local	Error Analysis
A	NA		☐Guessing ☐Careless Error ☐Stopped too Early ☐Mixed Up Concepts
B			
C			
D*			

Implications for Instruction/Notes

4.9(B) solve one- and two-step problems using data in whole number, decimal, and fraction form in a frequency table, dot plot, or stem-and-leaf plot

2015 – Sample Q21

21 Karnika recorded the number of minutes she practiced volleyball each week for several weeks. She used a stem and leaf plot to organize the data.

Volleyball Practice Time

Stem	Leaf
14	0 2 2
15	5 5
16	0

14|2 means 142 minutes.

Based on the data, what is the amount of time in minutes Karnika practiced volleyball?

A 894 min

B 597 min

C 594 min

D 1,224 min

*** Correct answer (A)**

Analysis of Assessed Standards

Multi Coding	**Content**	Supporting
	Process	4.1(A), 4.1(B), 4.1(E), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A*	NA	
B		
C		
D		

Error Analysis
☐Guessing
☐Careless Error
☐Stopped too Early
☐Mixed Up Concepts

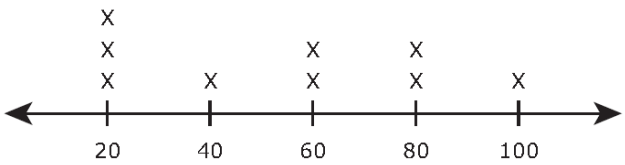
Implications for Instruction/Notes

4.9(B) (New) solve one- and two-step problems using data in whole number, decimal, and fraction form in a frequency table, dot plot, or stem-and-leaf plot
6.10(D) (Old) solve problems by collecting, organizing, displaying, and interpreting data

2014 – Q16

The 10 members of an art club collected a total of $520 during a fund-raiser. The amounts collected by 9 of the members are represented on the line plot below.

Amounts Collected
(dollars)



How many dollars were collected by the tenth member of the art club?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

*** Correct answer (40)**

Analysis of Assessed Standards

Dual Coding	**Content**	Supporting
	Process	3.1(D)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
40	51	
	49	
	0	
	0	

Error Analysis
☐Guessing
☐Careless Error
☐Stopped too Early
☐Mixed Up Concepts

Implications for Instruction/Notes

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IQ Analysis | Investigating the Question	SE 4.10(A)	RC: 4
4.10(A) distinguish between fixed and variable expenses	**Units:**	

No test questions 2013 – 2015

IQ Analysis | Investigating the Question	SE 4.10(B)	RC: 4
4.10(B)	**Units:**	

4.10(B) calculate profit in a given situation

2015 – Sample Q22

22 Raina sold pens decorated with fancy tape.

- Raina's expenses were $11.57 for supplies.
- Raina sold 12 pens for $2 each.

What was Raina's profit?

A $24.00

B $35.57

C $12.43

D $2.43

*** Correct answer (C)**

Analysis of Assessed Standards

Multi Coding	**Content**	Supporting
	Process	4.1(A), 4.1(B), 4.1(F)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B		
C*		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

4.10 (E) **Units:**

4.10(E) describe the basic purpose of financial institutions, including keeping money safe, borrowing money, and lending

2015 – Sample Q23

23 Which of these services is **not** provided by a financial institution such as a bank or credit union?

A Informing customers of the amount of money in their accounts

B Informing customers of how the money in their accounts must be spent

C Providing cash when customers make withdrawals from their accounts

D Providing loans to customers that can be paid back over time with interest

*** Correct answer (B)**

Analysis of Assessed Standards

Multi Coding	**Content**	Supporting
	Process	4.1(A), 4.1(B), 4.1(G)
Stimulus		
Thinking		
Related SEs		

Data Analysis

Item	State	Local
A	NA	
B*		
C		
D		

Error Analysis
- ☐ Guessing
- ☐ Careless Error
- ☐ Stopped too Early
- ☐ Mixed Up Concepts

Implications for Instruction/Notes

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IQ Analysis | Investigating the Question	SE	RC:
	Units:	

*** Correct answer**

Analysis of Assessed Standards		
Dual Coding	Content	
	Process	
PLC for PLC Analysis	Stimulus	
	Thinking	
Related SEs		

Data Analysis		
SE Level Data	State	Local

Item	State	Local
A/F		
B/G		
C/H		
D/J		

Error Type
☐Procedural
☐Application
☐Conceptual
☐Guessing

Instructional Analysis		
Evidence of Transfer	☐Similar to examples (taught) ☐Requires application (learned)	
Depth of Knowledge	☐ Level 1 ☐ Level 2	☐ Level 3 ☐ Level 4
Concept		

*** Correct answer**

Analysis of Assessed Standards		
Dual Coding	Content	
	Process	
PLC for PLC Analysis	Stimulus	
	Thinking	
Related SEs		

Data Analysis		
SE Level Data	State	Local

Item	State	Local
A/F		
B/G		
C/H		
D/J		

Error Type
☐Procedural
☐Application
☐Conceptual
☐Guessing

Instructional Analysis		
Evidence of Transfer	☐Similar to examples (taught) ☐Requires application (learned)	
Depth of Knowledge	☐ Level 1 ☐ Level 2	☐ Level 3 ☐ Level 4
Concept		

Analysis of Assessed Standards

So What?	
Now What?	

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