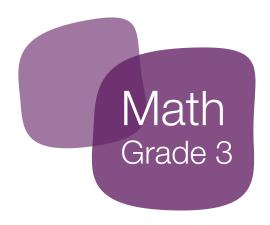


# 2013-2015 Released Test

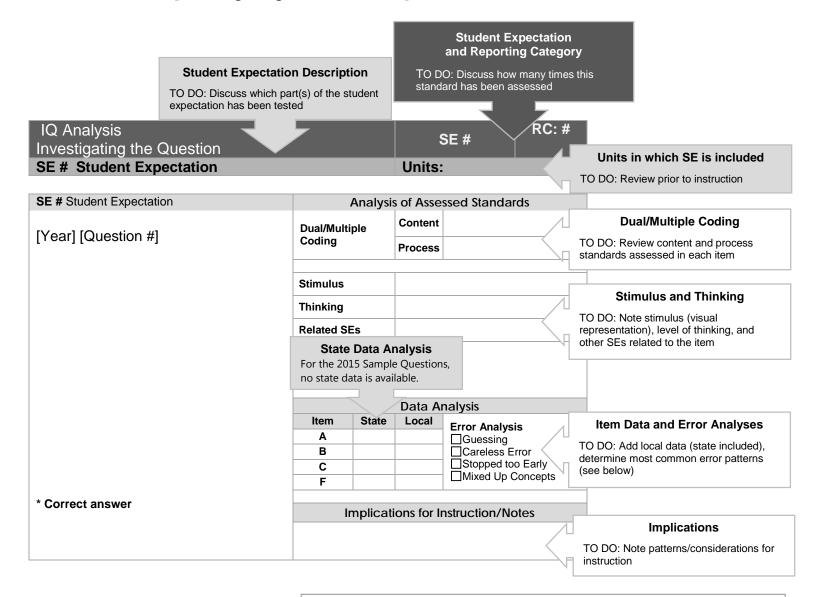
Aligned to the Standards

CONTENT BUILDER FOR THE PLC





#### 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.

<b>3.2(A)</b> compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate			Analysis of Assessed Standards			
			Mariel On diam		Readiness	
201	5 – Sample	Q1 Multi	Multi Coding		3.1(B), 3.1(F)	
1	The expan	ded notation of a number is shown.	_			
		Stim	ılus			
		$(3 \times 10,000) + (8 \times 100) + (2 \times 10) + (6 \times 1)$ Think	ing			
	What is th	is number written in standard form?	Related SEs			
	Wilde is ci	is named with standard form.				
			Data Analysis			
	V 38 U36				nalysis	
	<b>A</b> 38,026		State	Local	nalysis Error Analysis	
	-	A	State		Error Analysis  Guessing	
	<b>B</b> 38,260	A B	State		Error Analysis  Guessing Careless Error	
	<b>B</b> 38,260	A B C			Error Analysis  Guessing Careless Error Stopped too Early	
	-	A B			Error Analysis  Guessing Careless Error	
	<b>B</b> 38,260	A B C D*	NA NA	Local	Error Analysis  Guessing  Careless Error  Stopped too Early  Mixed Up Concepts	
	<b>B</b> 38,260 <b>C</b> 3,826	A B C D*	NA NA	Local	Error Analysis  Guessing Careless Error Stopped too Early	
	<b>B</b> 38,260 <b>C</b> 3,826	A B C D*	NA NA	Local	Error Analysis  Guessing  Careless Error  Stopped too Early  Mixed Up Concepts	
	<b>B</b> 38,260 <b>C</b> 3,826	A B C D*	NA NA	Local	Error Analysis  Guessing  Careless Error  Stopped too Early  Mixed Up Concepts	
	<b>B</b> 38,260 <b>C</b> 3,826	A B C D*	NA NA	Local	Error Analysis  Guessing  Careless Error  Stopped too Early  Mixed Up Concepts	



IQ Analysis   Investigating the Question	SE 3.2(B)	RC: 1
3.2(B)	Units:	

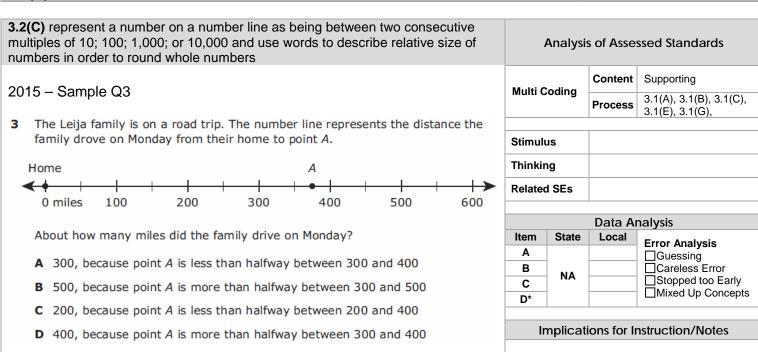
<b>3.2(B)</b> describe the mathematical relationships found in the base-10 place value system through the hundred thousands place			Analysis of Assessed Standards			
201	2015 – Sample Q2			Content	Supporting	
2015 – Sample Q2		Multi Coding		Process	3.1(B), 3.1(G)	
2	Which statement about the number 5,555 is true?					
_	which statement about the number 3,333 is true:	Stimul	us			
	A There is a 5 in the tens place, so 5 times 10 equals 50.	Thinkir	ng			
	<b>B</b> There is a 5 in the hundreds place, so 5 times 100 equals 50.	Related	Related SEs			
	<b>C</b> There is a 5 in the tens place, so 5 times 10 equals 500.			Data Analysis		
	<b>D</b> There is a 5 in the thousands place, so 5 times 1,000 equals 500.	Item	State	Local	Error Analysis	
		A*			☐Guessing	
		В	NA		☐Careless Error	
		С	INA.		Stopped too Early	
		D				
		Implications for Instruction/Notes				
* Co	prrect answer (A)					



3.2(C)

\* Correct answer (D)

Units:



Q Analysis	Investigating	the Question

SE 3.2(D)

**RC: 1** 

3.2(D)

Units:

<b>3.2(D)</b> compare and order whole numbers up to 100,000 and represent comparisons using the symbols >, <, or =	An	alysis	of Asses	ssed Standards
2015 – Sample Q4	Multi Coding		Content	Readiness
	Width Coc		Process	3.1(B), 3.1(F)
4 In which empty square would the number 1,677 make the comparison true?				
	Stimulus			
1 505	Thinking			
A 1,749 > 1,695	Related S	Es		
			Data Ar	nalveis
	Item S	State	Local	
B 1,645 < 1,684	Α			Error Analysis ☐Guessing
	B*	NA		☐Careless Error
	С	INA		☐Stopped too Early ☐Mixed Up Concepts
	D			□ winxed ob concepts
c 1,805 > 1,789	Implications for Instruction/Notes			
<b>D</b> 1,650 < 1,675				
* Correct answer (B)				
3.2(D) (New) compare and order whole numbers up to 100,000 and represent				
comparisons using the symbols >, <, or =  3.1(B) (Old) use place value to compare and order whole numbers through 9,999	An	alysis	of Asses	ssed Standards
			Content	Readiness
2014 – Q36	Dual Coding		Process	3.1(G)
A group of numbers is shown below.				
	Stimulus			
7,408 7,395 7,492 7,316	Thinking			
	Related S	Es		
Which statement about two of these numbers is true?			Data Ar	nalysis
	Item S	State	Local	
<b>F</b> 7,408 = 7,492, because 74 = 74	F	10		Error Analysis  ☐Guessing
<b>G</b> 7,316 > 7,408, because 16 > 8	G	10		☐Careless Error
- 1,515 × 1,100, 5000005 10 × 0	Н	11		Stopped too Early
U 7.402 < 7.20E hassure 02 < 0E	I*	60		☐Mixed Up Concepts

Implications for Instruction/Notes

\* Correct answer (J)

**H** 7,492 < 7,395, because 92 < 95

**J** 7,316 < 7,395, because 316 < 395

#### 3.3(A) Units:

**3.3(A) (New)** represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines

**3.2(B) (Old)** use fraction names and symbols to describe fractional parts of whole objects or sets of objects

2014 - Q9

Amelia shaded  $\frac{2}{8}$  of a rectangle. Which rectangle shows  $\frac{2}{8}$  shaded?









#### **Analysis of Assessed Standards**

Dual Coding	Content	Supporting
	Process	
Stimulus		
Thinking		
Related SEs		

Data Analysis						
Item	State	Local	Error Analysis			
Α	6		Guessing			
В	4		☐Careless Error			
C*	88		Stopped too Early			
D	2		☐Mixed Up Concepts			

#### Implications for Instruction/Notes

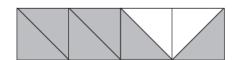
\* Correct answer (C)

**3.3(A) (New)** represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines

**3.2(B) (Old)** use fraction names and symbols to describe fractional parts of whole objects or sets of objects

2013 - Q14

Indira shaded part of a figure, as shown below.



What fraction of the figure is shaded?

- $F = \frac{2}{6}$
- $G = \frac{2}{8}$
- $H = \frac{6}{8}$
- $\frac{1}{6}$

\* Correct answer (H)

#### **Analysis of Assessed Standards**

Dual Coding	Content	Supporting			
Dual County	Process				
Stimulus					
Thinking					
Related SEs					
Data Analysis					

	Data Analysis						
Item	State	Local	Error Analysis				
F	5		Guessing				
G	15		Careless Error				
H*	79		Stopped too Early				
J	0		☐Mixed Up Concepts				

IQ Analysis   Investigating the Question	SE 3.3(B)	RC: 1
3.3(B) determine the corresponding fraction greater than zero and less than or equal to	Units:	
one with denominators of 2, 3, 4, 6, and 8 given a specified point on a number line		

No test questions 2013 – 2015

# IQ Analysis | Investigating the Question SE 3.3(C) RC: 1 3.3(C) explain that the unit fraction 1/b represents the quantity formed by one part of a whole that has been partitioned into b equal parts where b is a non-zero whole number

No test questions 2013 – 2015

IQ Analysis   Investigating the Question	SE 3.3(D)	RC: 1
<b>3.3(D)</b> compose and decompose a fraction a/b with a numerator greater than zero and less than or equal to b as a sum of parts 1/b	Units:	

<b>3.3(D)</b> compose and decompose a fraction a/b with a numerator greater than zero and less than or equal to b as a sum of parts 1/b		Analysis of Assessed Standards				
00.					Supporting	
2015 – Sample Q5		Multi Coding		Process	3.1(A), 3.1(B), 3.1(D), 3.1(F)	
5	A farmer gave $\frac{1}{4}$ of a bale of hay to a horse each day on Monday, Tuesday, and	011 1				
	Wednesday. Which equation can be used to find the fraction of a bale of hay the	Stimulu	IS			
	wednesday. Which equation can be used to find the fraction of a bale of hay the	Thinking Related SEs				
	farmer gave the horse on these three days?					
	$\mathbf{A}  \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$	Data Analysis				
		Item	State	Local	Error Analysis	
		A*			☐Guessing_	
	$\mathbf{B} \ \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{12}$	В	NA —		☐ Careless Error ☐ Stopped too Early ☐ Mixed Up Concepts	
	4 4 4 12	C				
		U			<u> </u>	
	$\mathbf{C}  \frac{1}{7} + \frac{1}{7} + \frac{1}{7} = \frac{3}{7}$		Implications for Instruction/Notes			
	$\mathbf{D} \ \frac{1}{7} + \frac{1}{7} + \frac{1}{7} = \frac{3}{21}$					
* Co	orrect answer (A)					

IQ Analysis   Investigating the Question	SE 3.3(E)	RC: 1
<b>3.3(E)</b> solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 2, 3, 4, 6, and 8	Units:	

No test questions 2013 – 2015



Units:

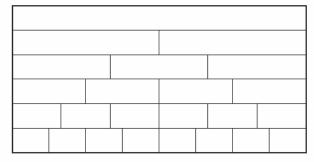
**3.3(F)** represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines

2015 - Sample Q6

3.3(F)

**6** Alyssa used fraction strips like the ones shown in the diagram in order to find equivalent fractions.

Fraction Strips



Which list shows only fractions that are equivalent to  $\frac{1}{2}$ ?

- **A**  $\frac{2}{4}$ ,  $\frac{3}{6}$ ,  $\frac{4}{8}$
- **B**  $\frac{2}{4}$ ,  $\frac{4}{6}$ ,  $\frac{6}{8}$
- $c = \frac{1}{4}, \frac{1}{6}, \frac{1}{8}$
- $D = \frac{2}{3}, \frac{3}{4}, \frac{5}{6}$

\* Correct answer (A)

<b>Analysis of Assessed S</b>	Standard
-------------------------------	----------

Multi Coding	Content	Readiness
nuiti oouiiig	Process	3.1(A), 3.1(B), 3.1(E), 3.1(F)

**Stimulus** 

Thinking

**Related SEs** 

Data Analysis						
Item	State	Local	Error Analysis			
A*			Guessing			
В	NA		☐Careless Error			
С	NA.		Stopped too Early			
D			☐Mixed Up Concepts			

3.3(G)

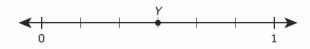
**Units:** 

3.3(G) explain that two fractions are equivalent if and only if they are both represented by the same point on the number line or represent the same portion of

# a same size whole for an area model

#### 2015 - Sample Q7

Point Y is labeled on the number line.



Which statement is true?

- A Point Y represents  $\frac{3}{6}$  and  $\frac{3}{4}$ , because both fractions represent 3 equal parts of a whole.
- **B** Point Y represents  $\frac{3}{6}$  and  $\frac{1}{2}$ , because both fractions are exactly halfway between 0 and 1 on the number line.
- **C** Point Y represents  $\frac{4}{6}$  and  $\frac{3}{6}$ , because both fractions represent 6 equal parts of a whole.
- **D** Point Y represents  $\frac{4}{6}$  and  $\frac{1}{2}$ , because both fractions are exactly halfway between 0 and 1 on the number line.

#### \* Correct answer (B)

#### **Analysis of Assessed Standards**

Multi Coding	Content	Supporting
main ooung	Process	3.1(B), 3.1(E), 3.1(G)
Stimulus		
Thinking		
Related SEs		

Data Analysis						
Item	State	Local	Error Analysis			
Α			Guessing			
B*	NA		Careless Error			
С	INA		Stopped too Early			
D			☐Mixed Up Concepts			



3.3(H) **Units:** 

3.3(H) compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models

Daniel shaded these two number lines to model two different fractions.

#### **Analysis of Assessed Standards**

Multi Coding	Content	Readiness
•	Process	3.1(A), 3.1(B), 3.1(E), 3.1(F)

**Related SEs** 

**Stimulus Thinking** 



Based on the number lines, which comparison is true?

**A**  $\frac{1}{3} > \frac{1}{2}$ 

2015 - Sample Q8

- B  $\frac{1}{3} = \frac{1}{2}$
- D  $\frac{2}{3} < \frac{1}{2}$

\* Correct answer (C)

		Data 7	ilalyolo
Item	State	Local	Error Analysis
Α			Guessing
В	NA		☐Careless Error
C*	INA		Stopped too Early
D			☐Mixed Up Concepts

Data Analysis

IQ Analysis   Investigating the Question	SE 3.4(A)	RC: 2
3.4(A)	Units:	

3 4						
sub	solve with fluency one-step and two-step problems involving addition and tion within 1,000 using strategies based on place value, properties of analysis of Assessed Standard ons, and the relationship between addition and subtraction			ssed Standards		
20.	15 – Sample Q9	Multi Co	Multi Coding Cont		Readiness	
20	15 – Sample Q9	Width County		Process	3.1(A), 3.1(B), 3.1(F)	
9	Ms. Elizondo shipped yogurt cups to stores on Monday.	Stimulus	s			
	<ul> <li>She shipped 648 cups of strawberry yogurt.</li> </ul>	Thinking Related SEs				
	She shipped 216 cups of peach yogurt.					
	<ul> <li>She shipped 264 cups of vanilla yogurt.</li> </ul>			Related SEs		
				Doto A		
	How many more cups of strawberry yogurt did Ms. Elizondo ship than cups of peach and vanilla yogurt combined?	Item	State	Data Ar Local		
	peach and value yogare combined.	A*			Error Analysis  ☐Guessing	
	<b>A</b> 168	В	NA		☐Careless Error	
	<b>B</b> 480	D			☐Stopped too Early ☐Mixed Up Concepts	
	<b>C</b> 248	lm	nlicat	ions for Ir	nstruction/Notes	
	<b>D</b> 178		іріісаі	10113 101 11	istraction/Notes	
3.4	(A) (New) solve with fluency one-step and two-step problems involving addition d subtraction within 1,000 using strategies based on place value, properties of					
anc						
3.3(	erations, and the relationship between addition and subtraction  (B) (Old) select addition or subtraction and use the operation to solve problems involving only only only only only only only only	А	ınalysi	s of Asses	ssed Standards	
3.3( who	erations, and the relationship between addition and subtraction  (B) (Old) select addition or subtraction and use the operation to solve problems involving ole numbers through 999			s of Asses	ssed Standards Readiness	
3.3( who	erations, and the relationship between addition and subtraction (B) (Old) select addition or subtraction and use the operation to solve problems involving	A Dual Co			Readiness	
3.3( who	erations, and the relationship between addition and subtraction  (B) (Old) select addition or subtraction and use the operation to solve problems involving oble numbers through 999  14 – Q4  amón has a total of 815 sheep in two fields. He has 348 sheep in one of the		oding	Content	Readiness	
3.3( who	erations, and the relationship between addition and subtraction  (B) (Old) select addition or subtraction and use the operation to solve problems involving ole numbers through 999  14 – Q4	Dual Co	oding s	Content	Readiness	
3.3( who 20'	erations, and the relationship between addition and subtraction  (B) (Old) select addition or subtraction and use the operation to solve problems involving oble numbers through 999  14 – Q4  amón has a total of 815 sheep in two fields. He has 348 sheep in one of the	Dual Co Stimulus	oding s	Content	Readiness	
3.3( who 20'	erations, and the relationship between addition and subtraction  (B) (Old) select addition or subtraction and use the operation to solve problems involving ole numbers through 999  14 – Q4  amón has a total of 815 sheep in two fields. He has 348 sheep in one of the elds. How many sheep does Ramón have in the other field?	Dual Co	oding s	Content	Readiness	
3.3( who	erations, and the relationship between addition and subtraction  (B) (Old) select addition or subtraction and use the operation to solve problems involving ole numbers through 999  14 – Q4  amón has a total of 815 sheep in two fields. He has 348 sheep in one of the elds. How many sheep does Ramón have in the other field?	Dual Co Stimulus	oding s	Content Process	Readiness 3.1(A)	
3.3( who 20° Ra fie F G	erations, and the relationship between addition and subtraction (B) (Old) select addition or subtraction and use the operation to solve problems involving ole numbers through 999  14 – Q4  amón has a total of 815 sheep in two fields. He has 348 sheep in one of the elds. How many sheep does Ramón have in the other field?  533  577  377	Dual Co Stimulus Thinking Related	oding s	Content	Readiness 3.1(A)	
3.3( who 20° Ra fie F G	erations, and the relationship between addition and subtraction (B) (Old) select addition or subtraction and use the operation to solve problems involving ole numbers through 999  14 – Q4  amón has a total of 815 sheep in two fields. He has 348 sheep in one of the elds. How many sheep does Ramón have in the other field?  533  577	Dual Co Stimulus Thinking Related	oding s g SEs State 10	Content Process	Readiness  3.1(A)  nalysis  Error Analysis  Guessing	
3.3( who 20° Ra fie F G	erations, and the relationship between addition and subtraction (B) (Old) select addition or subtraction and use the operation to solve problems involving ole numbers through 999  14 – Q4  amón has a total of 815 sheep in two fields. He has 348 sheep in one of the elds. How many sheep does Ramón have in the other field?  533  577  377	Dual Co Stimulus Thinking Related Item F	s SES State 10 7	Content Process	Readiness 3.1(A)  nalysis  Error Analysis	
3.3( who 20° Ra fie F G	erations, and the relationship between addition and subtraction (B) (Old) select addition or subtraction and use the operation to solve problems involving ole numbers through 999  14 – Q4  amón has a total of 815 sheep in two fields. He has 348 sheep in one of the elds. How many sheep does Ramón have in the other field?  533  577  377	Dual Co Stimulus Thinking Related	oding s g SEs State 10	Content Process	Readiness  3.1(A)  nalysis  Error Analysis  Guessing Careless Error	
3.3( who 20° Ra fie F G	erations, and the relationship between addition and subtraction (B) (Old) select addition or subtraction and use the operation to solve problems involving ole numbers through 999  14 – Q4  amón has a total of 815 sheep in two fields. He has 348 sheep in one of the elds. How many sheep does Ramón have in the other field?  533  577  377	Stimulus Thinking Related  Item F G H J*	SES State 10 7 4 80	Process  Data Ar Local	Readiness  3.1(A)  nalysis  Error Analysis  Guessing  Careless Error  Stopped too Early  Mixed Up Concepts	
3.3( who	erations, and the relationship between addition and subtraction (B) (Old) select addition or subtraction and use the operation to solve problems involving ole numbers through 999  14 – Q4  amón has a total of 815 sheep in two fields. He has 348 sheep in one of the elds. How many sheep does Ramón have in the other field?  533  577  377	Stimulus Thinking Related  Item F G H J*	SES State 10 7 4 80	Process  Data Ar Local	Readiness  3.1(A)  nalysis  Error Analysis  Guessing Careless Error Stopped too Early	
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3.3( who 20° Ra fie F G	erations, and the relationship between addition and subtraction (B) (Old) select addition or subtraction and use the operation to solve problems involving ole numbers through 999  14 – Q4  amón has a total of 815 sheep in two fields. He has 348 sheep in one of the elds. How many sheep does Ramón have in the other field?  533  577  377	Stimulus Thinking Related  Item F G H J*	SES State 10 7 4 80	Process  Data Ar Local	Readiness  3.1(A)  nalysis  Error Analysis  Guessing  Careless Error  Stopped too Early  Mixed Up Concepts	
3.3( who	erations, and the relationship between addition and subtraction (B) (Old) select addition or subtraction and use the operation to solve problems involving ole numbers through 999  14 – Q4  amón has a total of 815 sheep in two fields. He has 348 sheep in one of the elds. How many sheep does Ramón have in the other field?  533  577  377	Stimulus Thinking Related  Item F G H J*	SES State 10 7 4 80	Process  Data Ar Local	Readiness  3.1(A)  nalysis  Error Analysis  Guessing  Careless Error  Stopped too Early  Mixed Up Concepts	



3.4(A) (New) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction **Analysis of Assessed Standards** 5.3(A) (Old) use addition and subtraction to solve problems involving whole numbers and decimals Readiness Content **Dual Coding** 2014 - Q6Process 3.1(B) Frances used small, medium, and large cups to serve punch. **Stimulus Thinking**  She used 243 medium cups. **Related SEs**  She used 79 more medium cups than large cups. She used 56 more small cups than large cups. **Data Analysis** Item State Local **Error Analysis** F\* 49 ☐Guessing ☐Careless Error How many small cups did Frances use to serve punch? G 12 ☐Stopped too Early Н 6 220 ☐Mixed Up Concepts J 32 108 Implications for Instruction/Notes **H** 266 Not here J \* Correct answer (F) 3.4(A) (New) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of **Analysis of Assessed Standards** operations, and the relationship between addition and subtraction 5.11(A) (Old) solve problems involving changes in temperature Readiness Content 2014 - Q13 **Dual Coding Process 13** A five-day weather forecast is shown below. **Stimulus** Monday Tuesday Wednesday Thursday Friday **Thinking Related SEs** Data Analysis Rainv Cloudy Partly cloudy Sunny Sunny Item State Local **Error Analysis** High: 70°F High: 74°F High: 76°F High: 82°F High: 76°F Α 7 ☐Guessing 68°F 61°F 58°F 64°F 68°F В 8 ☐Careless Error ☐Stopped too Early C\* 80 ☐Mixed Up Concepts Based on this forecast, on which days will there be a difference of 18°F between the 5 high and low temperatures? Implications for Instruction/Notes A Wednesday, Thursday, and Friday **B** Thursday only C Wednesday and Thursday only **D** Monday only \* Correct answer (C)



3.4(A) (New) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction **Analysis of Assessed Standards** 3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999 Readiness Content **Dual Coding** 2014 - Q43 Process 3.1(A) The table below shows the number of textbooks for five subjects at a school. **Stimulus** Textbooks **Thinking** Number of Subject **Related SEs** Textbooks Math 214 Data Analysis Reading 187 Item State Local **Error Analysis A**\* 75 ☐Guessing Science 226 R 12 ☐Careless Error Language 208 ☐Stopped too Early С 5 ☐Mixed Up Concepts 193 History D 6 What is the total number of math, reading, and language textbooks at this Implications for Instruction/Notes school? A 609 **B** 1,028 **C** 699 **D** 599 \* Correct answer (A) 3.4(A) (New) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction **Analysis of Assessed Standards** 3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999 Readiness Content **Dual Coding** 2013 - Q11 Process 3.1(B) Gilbert had a total of 85 CDs to put in stacks. He put 27 CDs in one stack and **Stimulus** 39 CDs in a second stack. How many CDs did Gilbert have left to put in stacks? **Thinking** Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value. **Related SEs** Data Analysis Item State Local **Error Analysis** 54 ☐Guessing ☐Careless Error 46 19 ☐Stopped too Early 0 ☐Mixed Up Concepts 0 Implications for Instruction/Notes \* Correct answer (19)



<b>3.4(A) (New)</b> solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of					
operations, and the relationship between addition and subtraction  5.11(A) (Old) solve problems involving changes in temperature	Analysis of Assessed Standards			ssed Standards	
	D l O		Content	Readiness	
2013 – Q12	Dual Co	oding	Process	3.1(A)	
Gavin started hiking at 8:00 A.M. when the temperature was 64°F.					
The temperature rose 17°F by noon.	Stimulu				
The temperature then fell 25°F by the time Gavin finished hiking.	Thinkin				
What was the temperature when Gavin finished hiking?	Related	SES			
Record your answer and fill in the bubbles on your answer document. Be sure to use			Data Analysis		
the correct place value.	Item	State 75	Local	Error Analysis	
		25		☐Guessing ☐Careless Error	
	56	0		Stopped too Early	
		0		☐Mixed Up Concepts	
	In	nnlicati	ons for Ir	nstruction/Notes	
		ipiicati	0113 101 11	istraction/ivotes	
* Correct answer (56)					
3.4(A) (New) solve with fluency one-step and two-step problems involving addition					
and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999	ļ	Analysis	s of Asses	ssed Standards	
operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999			s of Asses	ssed Standards Readiness	
operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving	Dual Co			Readiness	
operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999  2013 — Q24  A company received 492 phone calls from customers in June and 267 phone calls	Dual C	oding	Content	Readiness	
operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999  2013 – Q24	Dual Co	oding	Content	Readiness	
operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999  2013 – Q24  A company received 492 phone calls from customers in June and 267 phone calls from customers in July. What is the difference between the numbers of phone	Dual C	oding s g	Content	Readiness	
operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999  2013 — Q24  A company received 492 phone calls from customers in June and 267 phone calls from customers in July. What is the difference between the numbers of phone calls received in these two months?  F 225	Dual Co Stimulu	oding s g	Content	Readiness	
operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999  2013 — Q24  A company received 492 phone calls from customers in June and 267 phone calls from customers in July. What is the difference between the numbers of phone calls received in these two months?  F 225  G 759	Dual Co Stimulu Thinkin Related	oding s g SEs	Content Process	Readiness 3.1(A)	
operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999  2013 — Q24  A company received 492 phone calls from customers in June and 267 phone calls from customers in July. What is the difference between the numbers of phone calls received in these two months?  F 225	Dual Co Stimulu Thinkin Related	oding as g SEs	Content Process	Readiness 3.1(A)  nalysis  Error Analysis	
operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999  2013 — Q24  A company received 492 phone calls from customers in June and 267 phone calls from customers in July. What is the difference between the numbers of phone calls received in these two months?  F 225  G 759	Dual Co Stimulu Thinkin Related Item F*	oding s g SEs State 66	Content Process	Readiness  3.1(A)  nalysis  Error Analysis  Guessing	
operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999  2013 — Q24  A company received 492 phone calls from customers in June and 267 phone calls from customers in July. What is the difference between the numbers of phone calls received in these two months?  F 225  G 759  H 235	Stimulu Thinkin Related Item F* G	oding s g SEs State 66 21	Content Process	Readiness  3.1(A)  nalysis  Error Analysis  Guessing Careless Error	
operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999  2013 — Q24  A company received 492 phone calls from customers in June and 267 phone calls from customers in July. What is the difference between the numbers of phone calls received in these two months?  F 225  G 759  H 235	Stimulu Thinkin Related Item F* G H	oding  SES  State 66 21 9	Content Process	Readiness  3.1(A)  nalysis  Error Analysis  Guessing	
operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999  2013 — Q24  A company received 492 phone calls from customers in June and 267 phone calls from customers in July. What is the difference between the numbers of phone calls received in these two months?  F 225  G 759  H 235	Stimulu Thinkin Related Item F* G	oding s g SEs State 66 21	Content Process	Readiness  3.1(A)  nalysis  Error Analysis  Guessing Careless Error Stopped too Early	
operations, and the relationship between addition and subtraction  3.3(B) (Old) select addition or subtraction and use the operation to solve problems involving whole numbers through 999  2013 — Q24  A company received 492 phone calls from customers in June and 267 phone calls from customers in July. What is the difference between the numbers of phone calls received in these two months?  F 225  G 759  H 235	Stimulu Thinkin Related Item F* G H J	oding  SES  State 66 21 9 4	Process  Data Ar Local	Readiness  3.1(A)  nalysis  Error Analysis  Guessing Careless Error Stopped too Early	



<ul> <li>3.4(A) (New) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction</li> <li>5.3(A) (Old) use addition and subtraction to solve problems involving whole numbers and decimals</li> </ul>	Analysis of Assessed Standards			
2013 – Q27	Dual Coding		Content	Readiness
2010 421			Process	3.1(A)
Alex used blue, red, and green pieces of plastic to make a design.	Stimul	us		
<ul> <li>He used 84 green pieces of plastic.</li> </ul>	Thinkir	ng		
<ul> <li>He used 20 more green pieces of plastic than blue pieces of plastic.</li> </ul>	Related SEs			
<ul> <li>He used 15 more red pieces of plastic than blue pieces of plastic.</li> </ul>				
		0	Data A	nalysis
What is the number of red pieces of plastic Alex used?	Item A*	State 51	Local	Error Analysis ☐Guessing
<b>A</b> 79	В	6		☐Careless Error
	С	13		☐Stopped too Early ☐Mixed Up Concepts
<b>B</b> 89	D	30		
<b>C</b> 49	ir	mplicati	ions for I	nstruction/Notes
<b>D</b> 119				
* Correct answer (A)				



#### 3.4(B)

Units:

3.4(B) (New) round to the nearest 10 or 100 or use compatible numbers to
estimate solutions to addition and subtraction problems

**3.5(A) (Old)** round whole numbers to the nearest ten or hundred to approximate reasonable results in problem situations

#### 2013 - Q18

Mr. Neufeld grew a vegetable garden last year. The list below shows the number of three vegetables he grew.

- 718 onions
- · 374 potatoes
- 187 cucumbers

Which expression shows the best way to estimate the difference between the number of potatoes and the number of cucumbers Mr. Neufeld grew in his garden?

- $\mathbf{F}$  370 + 190
- G 400 + 100
- H 400 100
- **J** 370 190
- \* Correct answer (J)

#### **Analysis of Assessed Standards**

<b>Dual Coding</b>	Content	Supporting
	Process	3.1(B)
Stimulus		
Thinking		
Related SEs		

		Data A	nalysis
Item	State	Local	Error Analysis
F	28		Guessing
G	10		Careless Error
Н	14		Stopped too Early
J*	47		☐Mixed Up Concepts

#### Implications for Instruction/Notes

## **3.4(B) (New)** round to the nearest 10 or 100 or use compatible numbers to estimate solutions to addition and subtraction problems

**3.5(B) (Old)** use strategies including rounding and compatible numbers to estimate solutions to addition and subtraction problems

2014 - Q27

The table below shows the number of towns in five Texas counties.

#### Texas Counties

County	Number of Towns
Brown	21
Galveston	37
Hill	29
Dallas	72
Montgomery	46

What is the best estimate of the total number of towns in Galveston, Dallas, and Montgomery Counties?

- **A** 300
- **B** 160
- **C** 140
- **D** 170
- \* Correct answer (B)

#### **Analysis of Assessed Standards**

Content Supporting

Dual Coding		
	Process	3.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis							
Item	State	Local	Error Analysis				
Α	7		Guessing				
В*	72		☐Careless Error				
С	12		Stopped too Early				
D	8		☐Mixed Up Concepts				

#### 3.4(C) **Units:** 3.4(C) (New) determine the value of a collection of coins and bills **Analysis of Assessed Standards** 3.1(C) (Old) determine the value of a collection of coins and bills Content Supporting 2014 - Q17 **Dual Coding** Process 3.1(A) Payton has 9 coins that total exactly \$1.27. Which set of coins could be Payton's coins? Stimulus **Thinking Related SEs** Data Analysis State Local Item **Error Analysis** Α 5 Guessing Careless Error Stopped too Early В\* 72 С 16 Mixed Up Concepts D 6 Implications for Instruction/Notes

\* Correct answer (B)

IQ Analysis   Investigating the Question	SE 3.4(D)	RC: 2
3.4(D)	Units:	

<ul> <li>3.4(D) (New) determine the total number of objects when equally sized groups of objects are combined or arranged in arrays up to 10 by 10</li> <li>3.4(A) (Old) learn and apply multiplication facts through 12 by 12 using concrete models and objects</li> </ul>	Analysis of Assessed Standards			
2010 00			Content	Supporting
2013 – Q9	Dual C	oding	Process	3.1(C)
Emery drew 3 rows of stick figures. Each row has the same number of stick				
figures. One of the rows is shown below.	Stimul	us		
	Thinkin	ng		
	Related	d SEs		
TTTTTTT				
			Data A	nalysis
The control of the first control of the control of	Item	State	Local	Error Analysis
How many stick figures are in 3 rows?	Α	1		☐Guessing
A 13	В	2		☐Careless Error ☐Stopped too Early
A 12	C	23		☐Mixed Up Concepts
<b>B</b> 24	D*	73		
<b>c</b> 9	lr	nplicat	ions for Ir	nstruction/Notes
D Not here				
D Not here				
D Not here				



3.4(E) Units:

**3.4(E) (New)** represent multiplication facts by using a variety of approaches such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line, and skip counting

**3.6(B) (Old)** identify patterns in multiplication facts using concrete objects, pictorial models, or technology

2013 - Q43

Janie collected  $10\ \text{sea}$  stars at the beach. Each sea star had  $5\ \text{arms}$ , as shown below.



Which expression can be used to find the total number of arms on 10 sea stars?

- A 10 ÷ 5
- **B** 10 5
- C 10 + 5
- **D**  $10 \times 5$
- \* Correct answer (D)

#### **Analysis of Assessed Standards**

Content	Supporting
Process	3.1(E)
	Process

Data Analysis						
Item	State	Local	Error Analysis			
Α	19		Guessing			
В	2		☐Careless Error			
С	5		Stopped too Early			
D*	73		☐Mixed Up Concepts			



O Analysis	Investigating	the Ouestien
iQ Anaiysis	Investigating	the Question

SE 3.4(F)

RC: 2

3.4(F)

Units:

<b>3.4(F)</b> recall facts to multiply up to 10 by 10 with automaticity and recall the corresponding division facts		Analysi	s of Asse	ssed Standards		
				Supporting		
2015 – Sample Q10	Multi Coding		Process	3.1(A), 3.1(B), 3.1(F)		
10 Rebekah planted 21 flowers in her garden. She planted the flowers in 3 rows with the same number of flowers in each row. How many flowers did she plant in each row?	Stimul	ıs				
TOW!	Thinkir	ng				
Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.	Related	d SEs				
			Data Ar	nalvsis		
	Item	State	Local	Error Analysis		
				□Guessing		
	7	NA		☐Careless Error ☐Stopped too Early		
				☐Mixed Up Concepts		
	Ir	nplicat	ions for Ir	nstruction/Notes		
		-				
* Correct answer (7)						
<b>3.4(F) (New)</b> recall facts to multiply up to 10 by 10 with automaticity and recall the corresponding division facts		Analysi	s of Asses	ssed Standards		
3.4(B) (Old) solve and record multiplication problems (up to two digits times one digit)						
			Content	Supporting		
2014 – Q31	Dual C	oding	Process	3.1(F)		
			1 100635	J. 1(1 <i>)</i>		
In the equations below, each $\bigwedge$ represents the same number.	Stimul	ıs				
	Thinkir	ng				
○ + △ = 11	Related	d SEs				
^ ^			Data Analysis			
		State	Local			
	Item A	16	Local	Error Analysis		
What is the value of ?	В	17		☐Guessing ☐Careless Error		
	C*	50		☐Stopped too Early		
<b>A</b> 3	D	16		☐Mixed Up Concepts		
<b>B</b> 2	Implications for Instruction/Notes					

\* Correct answer (C)

**B** 2

**C** 8

**D** 9

IQ Analysis | Investigating the Question

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

No test questions 2013 – 2015

\* Correct answer (A)

IQ Analysis   Investigating the Question			SE 3.4	(H)	RC: 2
3.4(H)			Units:		
<ul> <li>3.4(H) (New) determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally</li> <li>3.4(C) (Old) use models to solve division problems and use number sentences to record the solutions</li> </ul>	Ar	nalysis	of Asses	ssed St	andards
2014 – Q1	Dual Cod	lina	Content	Supporting	
2014 – Q1	Duai Coc	airig	Process	3.1(C)	
Sofia will arrange 42 feathers into 7 glass cases for her collection.			ı		
	Stimulus				
	Thinking				
	Related S	SEs			
P. P. P. P.					
	Itam (	State	Data Ar	nalysis	
	Item S	91	Local		Analysis
	В	3		□Gue □Care	eless Error
	С	5			ped too Early
	D	1		∐Міх€	ed Up Concepts
rrrr	Imp	olicati	ons for Ir	istructi	on/Notes
There will be an equal number of feathers in each glass case. Which number sentence can be used to find the number of feathers in each glass case?					
<b>A</b> 42 ÷ 7 = 6					
<b>B</b> 42 + 7 = 49					
$\mathbf{C} \ \ 42 \times 7 = 294$					
<b>D</b> $42 - 7 = 35$					

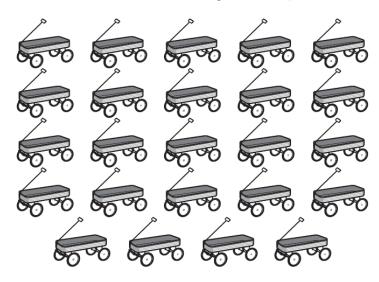


**3.4(H) (New)** determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally

**3.4(C) (Old)** use models to solve division problems and use number sentences to record the solutions

#### 2014 - Q25

The picture below shows the number of wagons at a toy store.



The wagons will be arranged in 2 equal rows. How many wagons will be in each row?

- **A** 6, because  $24 \div 4 = 6$
- **B** 2, because  $24 \div 12 = 2$
- **C** 12, because  $24 \div 2 = 12$
- **D** 8, because  $24 \div 3 = 8$
- \* Correct answer (C)

#### **Analysis of Assessed Standards**

Dual Coding	Content	Supporting
		3.1(G)
Stimulus		
Thinking		
Related SEs		

Data Analysis								
Item	State	Local	Error Analysis					
Α	17		Guessing					
В	12		☐Careless Error					
C*	67		Stopped too Early					
D	3		☐Mixed Up Concepts					



3.4(H) (New) determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally **Analysis of Assessed Standards** 3.4(C) (Old) use models to solve division problems and use number sentences to record the solutions Content Supporting 2014 - Q41**Dual Coding** Process 3.1(C) . There are 18 trumpets in a music room. Stimulus **Thinking Related SEs Data Analysis** Item State Local **Error Analysis** Α ☐Guessing ☐Careless Error ☐Stopped too Early В 4 С 14 ☐Mixed Up Concepts D\* 75 These trumpets will be placed in 3 equal rows. Which number sentence can be used to find the number of trumpets in each row? Implications for Instruction/Notes **A**  $18 \times 3 = 54$ **B**  $18 \times 2 = 36$ **C**  $18 \div 2 = 9$ 

**D**  $18 \div 3 = 6$ 

\* Correct answer (D)

3.4(H) (New) determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally **Analysis of Assessed Standards** 3.4(C) (Old) use models to solve division problems and use number sentences to record the solutions Content Supporting **Dual Coding** 2013 - Q12 Process 3.1(C) The picture below shows the number of fish Mrs. Gonzales wants to put into fish Stimulus tanks. **Thinking** &Dr &Dr &Dr &Dr &Dr &Dr &Dr &Dr **Related SEs Data Analysis** Item State Local **Error Analysis** F 17 ☐Guessing ☐Careless Error ☐Stopped too Early G\* 71 н 4 ☐Mixed Up Concepts J 7 Implications for Instruction/Notes She will put 7 fish into each tank. Which number sentence shows the number of fish tanks Mrs. Gonzales needs for her fish? **F**  $56 \div 7 = 9$ **G**  $56 \div 7 = 8$ **H**  $56 \div 7 = 6$ **J**  $56 \div 7 = 7$ \* Correct answer (G)

3.4(H) (New) determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally **Analysis of Assessed Standards** 3.4(C) (Old) use models to solve division problems and use number sentences to record the solutions Content Supporting 2013 - Q29 **Dual Coding** Process 3.1(C) The barrels shown below will be placed in 3 rows at a park. There will be an equal number of barrels in each row. Stimulus **Thinking Related SEs** Data Analysis Item State Local **Error Analysis** 30 Α ☐Guessing ☐Careless Error ☐Stopped too Early В 4 C\* 59 ☐Mixed Up Concepts D 5 Implications for Instruction/Notes Which number sentence shows the number of barrels that will be in each row? **A**  $30 \div 6 = 5$ 

P	36	. 7	2 _ 1	7

**D** 
$$36 \div 6 = 6$$



**B**  $36 \div 3 = 12$ 

**C**  $30 \div 3 = 10$ 

<sup>\*</sup> Correct answer (C)

<ul> <li>3.4(H) (New) determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally</li> <li>3.4(C) (Old) use models to solve division problems and use number sentences to record the solutions</li> </ul>	Analysis of Assessed Standards		
2013 – Q45	Dual Coding Conto	Content	Supporting
2013 – Q43	Dual County	Process	3.1(C)
Nelli will arrange 22 mirrors on 2 shelves in a store. There will be an equal number of mirrors on each of the shelves.	Stimulus		
	Thinking		
	Related SEs		
TTTTT		nalysis	
	Item State	Local	Error Analysis
	A* 79 B 6		☐Guessing ☐Careless Error
	C 10		☐Stopped too Early☐Mixed Up Concepts
999999	Implicat	ions for li	nstruction/Notes
How many mirrors will be on each of the shelves?			
<b>A</b> 11, because 22 ÷ 2 = 11			
<b>B</b> 24, because 22 + 2 = 24			
<b>C</b> 44, because 22 × 2 = 44			
<b>D</b> 20, because $22 - 2 = 20$			
* Correct answer (A)			

IQ Analysis   Investigating the Question	SE 3.4(I)	RC: 1
3.4(I) determine if a number is even or odd using divisibility rules	Units:	

No test questions 2013 – 2015



3.4(J) Units:

<b>3.4(J) (New)</b> determine a quotient using the relationship between multiplication and division				
<b>4.6(A) (Old)</b> use patterns and relationships to develop strategies to remember basic multiplication and division facts (such as the patterns in related multiplication and division number sentences (fact families) such as $9 \times 9 = 81$ and $81 \div 9 = 9$ )	Analysis of Assessed Standards			
	Dual Coding	Content	Supporting	
2014 – Q1	Dual County	Process		
In the equation below, the $igwedge$ and the $igwedge$ represent different numbers.	Stimulus			
^	Thinking			
<u> </u>	Related SEs			
Which equation is in the same fact family?	Itam Ctata	Data A	nalysis	
	Item State A 6	Local	Error Analysis ☐Guessing	
	B 4 C* 85		☐Careless Error ☐Stopped too Early	
$\mathbf{B}  \triangle \times 72 = \boxed{}$	D 6		☐Mixed Up Concepts	
<b>C</b> 72 ÷ ∠ =	Implicat	ions for Ir	nstruction/Notes	
<b>D</b>				
* Correct answer (C)				
Common union (c)	l			
<b>3.4(J) (New)</b> determine a quotient using the relationship between multiplication and division	Analysi	s of Asso	seed Standards	
3.4(J) (New) determine a quotient using the relationship between multiplication	Analysi	s of Asse	ssed Standards	
<b>3.4(J) (New)</b> determine a quotient using the relationship between multiplication and division <b>3.6(C) (Old)</b> identify patterns in related multiplication and division sentences (fact families) such as $2 \times 3 = 6$ , $3 \times 2 = 6$ , $6 \div 2 = 3$ , $6 \div 3 = 2$	Analysi  Dual Coding	s of Asse		
<b>3.4(J) (New)</b> determine a quotient using the relationship between multiplication and division <b>3.6(C) (Old)</b> identify patterns in related multiplication and division sentences (fact families) such as $2 \times 3 = 6$ , $3 \times 2 = 6$ , $6 \div 2 = 3$ , $6 \div 3 = 2$ 2013 – Q2	-			
<b>3.4(J) (New)</b> determine a quotient using the relationship between multiplication and division <b>3.6(C) (Old)</b> identify patterns in related multiplication and division sentences (fact families) such as $2 \times 3 = 6$ , $3 \times 2 = 6$ , $6 \div 2 = 3$ , $6 \div 3 = 2$	-	Content		
<ul> <li>3.4(J) (New) determine a quotient using the relationship between multiplication and division</li> <li>3.6(C) (Old) identify patterns in related multiplication and division sentences (fact families) such as 2 x 3 = 6, 3 x 2 = 6, 6 ÷ 2 = 3, 6 ÷ 3 = 2</li> <li>2013 – Q2</li> <li>Belinda made 5 gallons of fruit punch for a party. There are 8 pints in each gallon</li> </ul>	Dual Coding	Content		
<ul> <li>3.4(J) (New) determine a quotient using the relationship between multiplication and division</li> <li>3.6(C) (Old) identify patterns in related multiplication and division sentences (fact families) such as 2 x 3 = 6, 3 x 2 = 6, 6 ÷ 2 = 3, 6 ÷ 3 = 2</li> <li>2013 – Q2</li> <li>Belinda made 5 gallons of fruit punch for a party. There are 8 pints in each gallon of punch. Which expression is in the same fact family as 8 x 5 = 40?</li> </ul>	Dual Coding Stimulus	Content		
<ul> <li>3.4(J) (New) determine a quotient using the relationship between multiplication and division</li> <li>3.6(C) (Old) identify patterns in related multiplication and division sentences (fact families) such as 2 x 3 = 6, 3 x 2 = 6, 6 ÷ 2 = 3, 6 ÷ 3 = 2</li> <li>2013 – Q2</li> <li>Belinda made 5 gallons of fruit punch for a party. There are 8 pints in each gallon of punch. Which expression is in the same fact family as 8 x 5 = 40?</li> <li>F 5 x 40</li> </ul>	Dual Coding  Stimulus  Thinking  Related SEs	Content Process	Supporting	
<ul> <li>3.4(J) (New) determine a quotient using the relationship between multiplication and division</li> <li>3.6(C) (Old) identify patterns in related multiplication and division sentences (fact families) such as 2 x 3 = 6, 3 x 2 = 6, 6 ÷ 2 = 3, 6 ÷ 3 = 2</li> <li>2013 – Q2</li> <li>Belinda made 5 gallons of fruit punch for a party. There are 8 pints in each gallon of punch. Which expression is in the same fact family as 8 x 5 = 40?</li> <li>F 5 x 40</li> <li>G 8 + 5</li> </ul>	Dual Coding Stimulus Thinking	Content Process	Supporting  nalysis  Error Analysis	
<ul> <li>3.4(J) (New) determine a quotient using the relationship between multiplication and division</li> <li>3.6(C) (Old) identify patterns in related multiplication and division sentences (fact families) such as 2 x 3 = 6, 3 x 2 = 6, 6 ÷ 2 = 3, 6 ÷ 3 = 2</li> <li>2013 – Q2</li> <li>Belinda made 5 gallons of fruit punch for a party. There are 8 pints in each gallon of punch. Which expression is in the same fact family as 8 x 5 = 40?</li> <li>F 5 x 40</li> <li>G 8 + 5</li> <li>H 40 ÷ 8</li> </ul>	Dual Coding  Stimulus  Thinking  Related SEs  Item State	Content Process	Supporting  nalysis  Error Analysis  Guessing Careless Error	
<ul> <li>3.4(J) (New) determine a quotient using the relationship between multiplication and division</li> <li>3.6(C) (Old) identify patterns in related multiplication and division sentences (fact families) such as 2 x 3 = 6, 3 x 2 = 6, 6 ÷ 2 = 3, 6 ÷ 3 = 2</li> <li>2013 – Q2</li> <li>Belinda made 5 gallons of fruit punch for a party. There are 8 pints in each gallon of punch. Which expression is in the same fact family as 8 x 5 = 40?</li> <li>F 5 x 40</li> <li>G 8 + 5</li> <li>H 40 ÷ 8</li> </ul>	Dual Coding  Stimulus  Thinking  Related SEs  Item State  F 9  G 3  H* 87	Content Process	Supporting  nalysis  Error Analysis  Guessing	
<ul> <li>3.4(J) (New) determine a quotient using the relationship between multiplication and division</li> <li>3.6(C) (Old) identify patterns in related multiplication and division sentences (fact families) such as 2 x 3 = 6, 3 x 2 = 6, 6 ÷ 2 = 3, 6 ÷ 3 = 2</li> <li>2013 – Q2</li> <li>Belinda made 5 gallons of fruit punch for a party. There are 8 pints in each gallon of punch. Which expression is in the same fact family as 8 x 5 = 40?</li> <li>F 5 x 40</li> <li>G 8 + 5</li> <li>H 40 ÷ 8</li> </ul>	Dual Coding  Stimulus  Thinking  Related SEs  Item State  F 9  G 3  H* 87  J 1	Process  Data Al Local	Supporting  nalysis  Error Analysis  Guessing  Careless Error  Stopped too Early  Mixed Up Concepts	
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3 1 3 3	SE 3.4(K)	RC: 2
3.4(K)	Units:	

<b>3.4(K)</b> solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts	P	Inalysi	s of Asses	ssed Standards
2015 Sample 011	Multi Cod		Content	Readiness
2015 – Sample Q11	Widiti C	Juliy	Process	3.1(A), 3.1(B), 3.1(F)
11 A music teacher had 4 boxes of recorders. There were 9 recorders in each box.				
The music teacher gave an equal number of recorders to each of 6 classes. How many recorders did each class receive?	Stimulu			
<b>A</b> 7	Thinking			
	Related SEs			
<b>B</b> 6			Data Ar	nalysis
<b>C</b> 30	Item	State	Local	Error Analysis
<b>D</b> 36	B*			☐Guessing ☐Careless Error
	C	NA		☐Stopped too Early ☐Mixed Up Concepts
	In	nplicat	ions for Ir	nstruction/Notes
* Correct answer (B)				
<b>3.4(K) (New)</b> solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts <b>4.4(C) (Old)</b> recall and apply multiplication facts through 12 x 12	P	Inalysi	s of Asses	ssed Standards
2014 – Q26	Dual Co	ndina	Content	Readiness
2014 - Q20	Duai oc	zamig	Process	3.1(B)
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	Stimulu			
album?	Thinkin			
Record your answer and fill in the bubbles on your answer document. Be sure to	Related			
use the correct place value.	Relateu	JES		
		<b>a.</b> .	Data Ar	nalysis
	Item	State 51	Local	Error Analysis ☐Guessing
	63	48		Careless Error
	03	0		☐Stopped too Early ☐Mixed Up Concepts
	In	nplicat	ions for Ir	nstruction/Notes
* Correct answer (63)				



<b>3.4(K) (New)</b> solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts <b>3.4(B) (Old)</b> solve and record multiplication problems (up to two digits times one digit)	Analysis of Assessed Standards			
Cit(2) (Cita) conta ana record manaphodulon problemo (ap to the digite anno one digit)			Content	Readiness
2013 – Q5	Dual Coding		Process	3.1(A)
			1100033	J. 1(A)
Andy has trumpet practice 4 times every month. Each practice lasts 2 hours. What is the total number of hours that Andy will practice in 9 months?	Stimulu	ıs		
<b>A</b> 72	Thinkin	ıg		
<b>B</b> 156	Related	I SEs		
			Data A	achycic
C 36	Item	State	Data Aı Local	
<b>D</b> 104	A*	52		Error Analysis  ☐Guessing
	В	5		☐Careless Error
	С	39		Stopped too Early
	D	4		☐Mixed Up Concepts
	In	nnlicati	ions for Ir	nstruction/Notes
		присац	10113 101 11	istruction/ Notes
* Correct answer (A)				
3.4(K) (New) solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts  5.3(B) (Old) use multiplication to solve problems involving whole numbers (no more than	ļ	Analysi	s of Asse	ssed Standards
three digits times two digits without technology)			Content	Readiness
2013 – Q24	Dual C	ual Coding		
There are four times as many cows as horses on a farm. There are twice as many			Process	3.1(B)
horses as pigs on the farm. Which list shows the number of each type of animal on	Stimulu	ıs		
this farm?	Thinkin	ıg		
F 9 cows, 36 horses, and 18 pigs	Related	l SEs		
G 48 cows, 12 horses, and 24 pigs			5	
H 32 cows, 16 horses, and 8 pigs	ltom	State	Data Aı Local	nalysis
n 32 cows, 10 norses, and 6 pigs	Item F	15	Local	Error Analysis
J 72 cows, 18 horses, and 9 pigs	G	20		☐Guessing ☐Careless Error
	Н	17		☐Stopped too Early
	J*	47		☐Mixed Up Concepts
	Implications for Instruction/Notes			nstruction/Notes
* Correct answer (J)				



<b>3.4(K) (New)</b> solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts <b>4.4(C) (Old)</b> recall and apply multiplication facts through 12 x 12	Analysis of Assessed Standards			
2013 – Q45	Dual Coding		Content	
Ms. López bought 5 packages of crackers at a store. Each package had				
8 crackers. What was the total number of crackers in these 5 packages?	Stimul	us		
A 25	Thinkir	ng		
A 25	Related SEs			
<b>B</b> 13			Data A	nalveis
<b>c</b> 35	Item	State	Data Aı Local	
<b>C</b> 33	A	4	Local	Error Analysis
D Not here	В	6		☐Guessing ☐Careless Error
	С	3		Stopped too Early
	D*	86		☐Mixed Up Concepts
	Implications for Instruction/Notes			
* Correct answer (D)				



### 3.5(A)

Units:

**3.5(A)** represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations

#### 2015 - Sample Q12

12 There were 35 pretzels at a bakery. A baker made 20 more pretzels. The baker then sold 11 pretzels. Which equation shows how to find the number of pretzels there are now?

Multi Coding	Content	Readiness
	Process	3.1(A), 3.1(B), 3.1(D), 3.1(F)

**Stimulus** 

Thinking

**Related SEs** 

Data Analysis									
Item	State	Local	Error Analysis						
Α			Guessing						
В	NA		Careless Error						
С	INA		Stopped too Early						
D*			☐Mixed Up Concepts						

#### Implications for Instruction/Notes

#### \* Correct answer (D)

- **3.5(A) (New)** represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations
- 3.3(A) (Old) model addition and subtraction using pictures, words, and numbers

#### 2014 - Q22

Mrs. Lanier saved \$617 in January. In February she spent \$249 of the money she had saved. She saved \$291 more in March. Which number sentence can be used to find the amount of money Mrs. Lanier had at the end of March?

**F** 
$$617 + 249 - 291 =$$

**G** 
$$617 + 249 + 291 =$$

**H** 
$$617 - 249 - 291 =$$

#### \* Correct answer (J)

#### **Analysis of Assessed Standards**

Dual Coding	Content	Readiness
Duai Coung	Process	3.1(E)
Stimulus		
Thinking		
Related SEs		

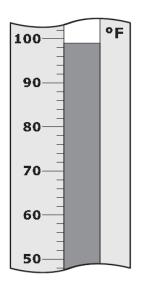
Data Analysis										
Item State Local Error Analysis										
F	11		Guessing							
G	13		Careless Error							
H 8			Stopped too Early							
J*	68		☐Mixed Up Concepts							

**3.5(A) (New)** represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations

4.12(A) (Old) use a thermometer to measure temperature and changes in temperature

#### 2014 - Q39

The thermometer below shows the high temperature on a summer day.



The low temperature on the same day was 24°F cooler. Which temperature is closest to the low temperature on that day?

- **A** 76°F
- **B** 52°F
- C 51°F
- **D** 75°F
- \* Correct answer (D)

#### **Analysis of Assessed Standards**

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

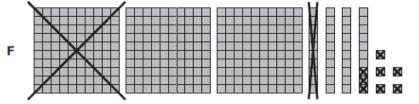
	Data Analysis									
Item	State	Local	Error Analysis							
Α	13		Guessing							
В	4		☐Careless Error							
С	11		Stopped too Early							
D*	71		☐Mixed Up Concepts							

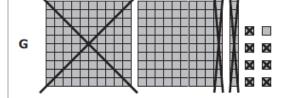


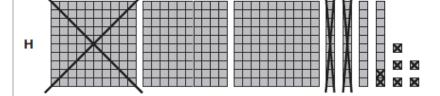
3.5(A) (New) represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations3.3(A) (Old) model addition and subtraction using pictures, words, and numbers

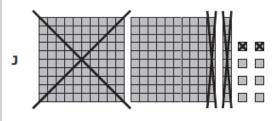
#### 2013 – Q16

Rob had 345 concert tickets to sell. He sold 127 of these tickets on Monday. Which model represents the number of tickets Rob had left to sell?









\* Correct answer (H)

#### **Analysis of Assessed Standards**

Content	Readiness
Process	3.14(D)
	Process

Data Analysis									
Item	State	Local	Error Analysis						
F	12		Guessing						
G	8		Careless Error						
H*	75		Stopped too Early						
J	5		☐Mixed Up Concepts						



2.5/P)	Unite:	
IQ Analysis   Investigating the Question	SE 3.5(B)	RC: 2

<b>3.5(B)</b> represent and solve one- and two-step multiplication and division problem within 100 using arrays, strip diagrams, and equations	S Analys	is of Asse	ssed Standards
		Content	Readiness
2015 – Sample Q13	Multi Coding	Process	3.1(A), 3.1(B), 3.1(D), 3.1(F)
13 Larry has 14 oranges. He will cut each of these oranges into 7 slices. Which arra	эу		
can be used to find the number of orange slices he will have?	Stimulus		
000000000000	Thinking		
	Related SEs		
A 00000000000 C 0000000			
0000000000000		Data A	nalysis
	Item State	Local	Error Analysis
0000000000000	A* B		☐Guessing ☐Careless Error
	C NA		☐Stopped too Early
B 000000000000000000000000000000000000	D		☐Mixed Up Concepts
B 0000000 D 000000	·		
	Implica	tions for l	nstruction/Notes
* Correct answer (A)			
<b>3.5(B) (New)</b> represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations <b>3.4(B) (Old)</b> solve and record multiplication problems (up to two digits times one digit)	Analysi	s of Asse	ssed Standards
2013 – Q32	Dual Coding	Content	Readiness
2013 – Q32	Duai Counig	Process	3.1(A)
Willis has 5 bags of marbles that have 18 marbles each. He also has 3 bags of	Ottomorton		
marbles that have 13 marbles each. What is the total number of marbles in thes 8 bags?	e Stimulus Thinking		
<b>F</b> 194	Related SEs		
<b>G</b> 47			
		Data A	nalysis
H 129	Item State	Local	Error Analysis
<b>J</b> 90	F 7 G 22		☐Guessing ☐Careless Error
	H* 56		Stopped too Early
	J 14		☐Mixed Up Concepts
	Implica	tions for I	nstruction/Notes
	The state of the s		



\* Correct answer (H)

pro	(B) (New) represent and solve one- and two blems within 100 using arrays, strip diagram B) (Old) represent multiplication and division site.	ns, ar	nd equation	าร			-	Analysi	s of Asse	ssed Standards
20.	13 – Q35						Dual C	odina	Content	Readiness
20	10 – Q00						Duai 0	ounig	Process	3.1(C)
W	nich model represents the expression 24	4 ÷ 3	?							
							Stimul	us		
			000		00		Thinkir	ng		
	00000000				Related SEs					
Α		C								
				기인					Data A	nalysis
	00000000						Item	State	Local	Error Analysis
							A B*	20 70		☐Guessing ☐Careless Error
							C	4		Stopped too Early
	$\bigcirc$		0 0 0		000	⊠ C	D	6		☐Mixed Up Concepts
В	$\bigcirc \bigcirc $	D	000		000	) XX C				
	$\bigcirc$		0 0 0	0	0 0 0	⊃ 🕱	Ir	nplicat	ions for lı	nstruction/Notes
	00000		0 0 0			- 101				
* Co	orrect answer (B)									

12 / marysis   myestigating the edestion				( )	
3.5(C)			Units:		
<b>3.5(C)</b> describe a multiplication expression as a comparison such as 3 x 24 represents 3 times as much as 24	Analysis of Assessed Standards				
2015 – Sample Q14	Multi Coding		Content	Supporting	
2010				3.1(A), 3.1(B), 3.1(G)	
14 Tyler read 10 books. The number of books Eli read can be represented by this					
expression.	Stimulus				
4 × 10	Thinking				
	Related SEs				
Which statement is true?					
		Data Analysis			
A Tyler read 10 times the number of books Eli read.	Item	State	Local	Error Analysis	
<b>B</b> Eli read 10 times the number of books Tyler read.	A B	NA NA		Guessing Careless Error Stopped too Early Mixed Up Concepts	
C Tyler read 4 times the number of books Eli read.	C				
<b>D</b> Eli read 4 times the number of books Tyler read.	D*				
En read 7 diffes the hamber of books Tyler read.	l m	mpliaat	ions for I	acturation /Natas	
	Implications for Instruction/Notes				
* Correct answer (D)					



IO Analysis | Investigating the Ouestion

IQ Analysis   Investigating the Question	SE 3.5(D)	RC: 2
3.5(D)	Units:	

<b>3.5(D)</b> determine the unknown whole number in a multiplication or division equation relating three whole numbers when the unknown is either a missing factor or product	,	Analysi	s of Asses	ssed Standards
2015 Sample 015		Multi Coding		Supporting
2015 – Sample Q15			Process	3.1(B), 3.1(F)
<b>15</b> What number belongs in the to make the equation true?				
		Stimulus		
		Thinking		
13 = ÷ 3	Related SEs			
<b>A</b> 10			Data Ar	nalysis
	Item	State	Local	Error Analysis
<b>B</b> 39	A B*			☐Guessing ☐Careless Error
<b>C</b> 16	С	NA		☐Stopped too Early
	D			☐Mixed Up Concepts
<b>D</b> 3				
<b>D</b> 3	Ir	nplicat	ions for Ir	nstruction/Notes
<b>D</b> 3	Ir	nplicat	ions for Ir	nstruction/Notes
<b>D</b> 3	Ir	nplicat	ions for Ir	nstruction/Notes
<b>D</b> 3	Ir	nplicat	ions for Ir	nstruction/Notes



<b>3.5(E)</b> represent real-world relatio descriptions	nships	using	numb	er pair	s in a table and verbal		Analysi	s of Asse	ssed Standards
0045 0-225 040								Content	Readiness
2015 – Sample Q16						Multi C	oding	Process	3.1(A), 3.1(B), 3.1(D), 3.1(F)
16 There are 10 sunglasses in ea number of sunglasses in differ						Stimul	ıs		
Sungl	asses					Thinkir			
A Number of Display Cases	2	6	11	12		Related	I SES		
Number of Sunglasses	20	30	40	50				Data Aı	nalysis
	_	!			l	Item	State	Local	Error Analysis
Sungl	SSES					A			□Guessing
	_	_			1	B*	NA		☐Careless Error ☐Stopped too Early
B Number of Display Cases	2	6	11	12		D			☐Mixed Up Concepts
Number of Sunglasses	20	60	110	120					
						Ir	nplicat	ions for Ir	nstruction/Notes
Sungl	asses								
C Number of Display Cases	2	6	11	12					
Number of Sunglasses	20	60	100	140					
Sungl	asses								
Number of Display Cases	2	6	11	12					
Number of Sunglasses	10	20	30	40					
* Correct answer (B)	•	•	•	•					



#### 3.5(E) (New) represent real-world relationships using number pairs in a table and verbal descriptions **Analysis of Assessed Standards** 5.5(A) (Old) describe the relationship between sets of data in graphic organizers such as lists, tables, charts, and diagrams Content Readiness 2014 - Q14 **Dual Coding** Process 3.1(F) The table below shows Ted's age at the end of different grade levels. Stimulus Ted's Age **Thinking** Grade Age **Related SEs** Level (years) 3 9 **Data Analysis** 4 10 Item State Local **Error Analysis** F 7 13 ☐Guessing ☐Careless Error ☐Stopped too Early G 4 11 17 28 Н ☐Mixed Up Concepts J\* 65 Which statement describes the relationship between Ted's grade level and his age? Implications for Instruction/Notes F Ted's age is equal to his grade level times 3. **G** Ted's age is equal to his grade level divided by 3. **H** Ted's age is equal to 6 less than his grade level. J Ted's age is equal to 6 more than his grade level. \* Correct answer (J)

<ul> <li>.5(E) (New) represent real-world relationships using number pairs in a table and erbal descriptions</li> <li>.7(A) (Old) describe the relationship between two sets of related data such as ordered airs in a table</li> </ul>				Analysis of Assessed Standards				
					Content	Readiness		
2014 – Q21			Dual	Coding	Process	3.1(F)		
The table belo	w shows the relationship	between the number	ne			- ( )		
	cks at a car dealership on		Stimu	ılus				
	Car Dea	alership	Think	ing				
	Number of Trucks	Number of Cars	Relat	ed SEs				
	78	110			Data A	nalysis		
	95	127	Item	State	Local	Error Analysis		
	83	115	Α	4		□Guessing		
	72	104	B*	51		☐Careless Error ☐Stopped too Early		
	91	123	С	4		☐Mixed Up Concept		
	91 ent describes the relations		D nd the	41 Implica	tions for I	☐Mixed Up Concep		
	er of cars $+17 = $ the num	ber of trucks						
	er of cars $-$ 32 $=$ the num							
	er of cars $-17 = $ the num							
D The number	er of cars $+32 = $ the num	har of trucks						



#### 3.5(E) (New) represent real-world relationships using number pairs in a table and verbal descriptions **Analysis of Assessed Standards** 3.7(A) (Old) generate a table of paired numbers based on a real-life situation such as insects and legs Content Readiness 2014 - Q42**Dual Coding Process** 3.1(B) Mr. Watkins takes 4 trips every year. Which table shows the total number of trips Mr. Watkins takes in 5, 7, and 12 years? **Stimulus** Thinking Trips **Trips Related SEs** Number of Total Number Number of Total Number of Trips Years Years of Trips Data Analysis F н 5 20 5 4 State Item Local **Error Analysis** F 11 7 24 8 7 ☐Guessing ☐Careless Error G 5 12 12 28 12 ☐Stopped too Early 14 Н ☐Mixed Up Concepts J\* 69 Trips Trips Implications for Instruction/Notes Total Number Number of Number of Total Number Years of Trips Years of Trips G J 5 9 5 20 7 7 11 28 12 12 16 48 \* Correct answer (J) 3.5(E) (New) represent real-world relationships using number pairs in a table and verbal descriptions **Analysis of Assessed Standards** 4.7(A) (Old) describe the relationship between two sets of related data such as ordered pairs in a table Content Readiness 2014 - Q47**Dual Coding Process** 3.1(F) The table below shows the number of fluid ounces in different numbers of **Stimulus** tablespoons. **Thinking** Fluid Ounces **Related SEs** Number of Number of **Tablespoons** Fluid Ounces **Data Analysis** 32 16 Item State Local **Error Analysis** Α 5 24 12 ☐Guessing В 15 ☐Careless Error 7 14 ☐Stopped too Early С 5 10 5 ☐Mixed Up Concepts D\* 74 Which statement describes the relationship between the number of tablespoons Implications for Instruction/Notes and the number of fluid ounces? **A** The number of tablespoons -8 = the number of fluid ounces **B** The number of tablespoons $\times 2$ = the number of fluid ounces **C** The number of tablespoons +16 = the number of fluid ounces **D** The number of tablespoons $\div 2$ = the number of fluid ounces \* Correct answer (D)

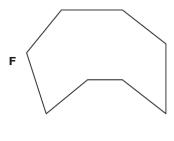
3.6(A)3.6(A) classify and sort two- and three-dimensional figures, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on **Analysis of Assessed Standards** attributes using formal geometric language Content Readiness **Multi Codina** 2015 - Sample Q17 **Process** 3.1(B), 3.1(E), 3.1(F) 17 The figures shown can be sorted into groups. **Stimulus Thinking Related SEs** Data Analysis Item State Local **Error Analysis** Α ☐Guessing Which of these shows a correct way to group these figures? В Careless Error NA ☐Stopped too Early С A 3 rectangles and 3 hexagons ☐Mixed Up Concepts D\* B 2 hexagons and 4 quadrilaterals Implications for Instruction/Notes C 2 hexagons, 2 pentagons, and 2 rectangles **D** 1 pentagon, 2 hexagons, and 3 quadrilaterals

3.6(A) (New) classify and sort two- and three-dimensional figures, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language 3.8(A) (Old) identify, classify, and describe two- and three-dimensional geometric figures by their attributes. The student compares two-dimensional figures, three-dimensional figures, or both by their attributes using formal geometry vocabulary

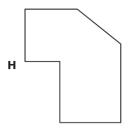
#### 2014 - Q2

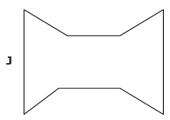
\* Correct answer (D)

Which of these figures is NOT an octagon?









#### **Analysis of Assessed Standards**

Dual Coding	Content	Readiness
Dual Couling	Process	3.1(C)
Stimulus		
Thinking		

Data Analysis								
Item	State	Local	Error Analysis					
F	2		Guessing					
G	3		Careless Error					
H*	87		Stopped too Early					
J	8		☐Mixed Up Concepts					

**Related SEs** 

#### Implications for Instruction/Notes

\* Correct answer (H)

G

	<ul> <li>3.6(A) (New) classify and sort two- and three-dimensional figures, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language</li> <li>3.8(A) (Old) identify, classify, and describe two- and three-dimensional geometric figures by their attributes. The student compares two-dimensional figures, three-dimensional figures, or both by their attributes using formal geometry vocabulary</li> </ul>			Analysis of Assessed Standards			
	2014 – Q37	Dual C	odina	Content	Readiness		
	2014 001		·g	Process	3.1(F)		
	The figures in Set Q share a characteristic.						
	<u> </u>	Stimulu	ıs				
	Set Q	Thinkir	ng				
		Related SEs					
			Data Analysis				
			State	Local			
		Item A*	66	2000.	Error Analysis  ☐Guessing		
	These figures do not share the characteristic.	В	21		Careless Error		
		С	8		☐Stopped too Early ☐Mixed Up Concepts		
		D	4				
		Ir	mplicati	ions for Ir	nstruction/Notes		
	Which statement best describes the characteristic shared by the figures in Set Q?						
	A The figures are all polygons.						
	<b>B</b> The figures are all quadrilaterals.						
	C The figures are all pentagons.						
	<b>D</b> The figures are all hexagons.						

IQ Analysis   Investigating the Question	SE 3.6(B)	RC: 3
<b>3.6(B)</b> use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles,	Units:	
and squares as examples of quadrilaterals and draw examples of quadrilaterals that do		
not belong to any of these subcategories		

No test questions 2013 – 2015

\* Correct answer (A)



3.6(C)	Units:	
IQ Analysis   Investigating the Question	SE 3.6(C)	RC: 3

<b>3.6(C)</b> determine the area of rectangles with whole number side lengths in problems using multiplication related to the number	Analysis of Assessed Standards			
2015 – Sample Q18	Multi Coding		Content	Readiness
2010 Campio Q10		ounig	Process	3.1(A), 3.1(B), 3.1(F)
<b>18</b> Joseph counted the square tiles on the ceiling of his rectangular closet. The area				
of each tile is 1 square foot. The ceiling has 5 rows of tiles with 4 tiles in each row. What is the area of the ceiling of Joseph's closet in square feet?		ıs		
		Thinking		
A 20 square feet	Related SEs			
<b>B</b> 10 square feet				
	Data Analysis			nalysis
C 18 square feet	Item	State	Local	Error Analysis
	A*	State	Local	Error Analysis
	A* B	State	Local	☐Guessing ☐Careless Error
	A*		Local	☐Guessing ☐Careless Error ☐Stopped too Early
	A* B		Local	☐Guessing ☐Careless Error
	A* B C		Local	☐Guessing ☐Careless Error ☐Stopped too Early
	A* B C	NA		☐Guessing ☐Careless Error ☐Stopped too Early
	A* B C	NA		Guessing Careless Error Stopped too Early Mixed Up Concepts



3.6(D)	Units:	
Q Analysis   Investigating the Question	SE 3.6(D)	RC: 3

<b>3.6(D)</b> decompose composite figures formed by rectangles into non-overlapping rectangles to determine the area of the original figure using the additive property of area	Į.	Analysis	s of Asses	ssed Standards
2045 Comple 040			Content	Supporting
2015 – Sample Q19	Multi Coding		Process	3.1(A), 3.1(B), 3.1(E), 3.1(F)
19 The diagram represents the floor of a storage building. The floor is composed of				` ,
two rectangles.	Stimulu	ıs		
	Thinkin	g		
	Related	SEs		
			Data Ar	nalysis
	Item	State	Local	Error Analysis
				☐Guessing
	42	NA -		☐Careless Error☐Stopped too Early
				☐Mixed Up Concepts
	In	nplicati	ions for Ir	nstruction/Notes
= 1 square yard				
What is the area of the floor in square yards?				
Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.				
* Correct answer (42)				



12 / Halysis   Hivestigating the edestion	<u> </u>	
IQ Analysis   Investigating the Question	SE 3.6(E)	RC: 3

<b>3.6(E)</b> decompose two congruent two-dimensional figures into parts with equal areas and express the area of each part as a unit fraction of the whole and recognize that equal shares of identical wholes need not have the same shape		Analysis of Assessed Standards			
			Multi Coding		Supporting
2015 – Sample Q20		Multi C	oding	Process	3.1(B), 3.1(E), 3.1(G)
20 The two figures shown are congruent, and one-fourth of	each figure is shaded.				
The two ligates shown are congruency and one roards or		Stimulu	ıs		
		Thinkin	g		
		Related	SEs		
Figure M Figure N				Data Ar	alvsis
					iaiyoio
		Item	State	Local	
Which statement about the shaded parts of these figures	is true?	Item A	State		Error Analysis  Guessing
	_	A B			Error Analysis  Guessing Careless Error
A The area of the shaded part of Figure M is greater than	_	Α	State		Error Analysis  Guessing Careless Error Stopped too Early
	_	A B			Error Analysis  Guessing Careless Error
<ul><li>A The area of the shaded part of Figure M is greater that part of Figure N.</li><li>B The area of the shaded part of Figure M is less than the</li></ul>	n the area of the shaded	A B C*			Error Analysis  Guessing Careless Error Stopped too Early
A The area of the shaded part of Figure M is greater that part of Figure N.	n the area of the shaded	A B C* D	NA	Local	Error Analysis  Guessing Careless Error Stopped too Early
<ul><li>A The area of the shaded part of Figure M is greater that part of Figure N.</li><li>B The area of the shaded part of Figure M is less than the</li></ul>	e area of the shaded	A B C* D	NA	Local	Error Analysis  Guessing  Careless Error  Stopped too Early  Mixed Up Concepts
<ul> <li>A The area of the shaded part of Figure M is greater than part of Figure N.</li> <li>B The area of the shaded part of Figure M is less than the part of Figure N.</li> <li>C The area of the shaded part of Figure M is equal to the</li> </ul>	e area of the shaded	A B C* D	NA	Local	Error Analysis  Guessing Careless Error Stopped too Early Mixed Up Concepts



3.7(A)

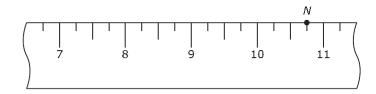
Units:

**3.7(A) (New)** represent fractions of halves, fourths, and eighths as distances from zero on a number line

**3.10(A) (Old)** locate and name points on a number line using whole numbers and fractions, including halves and fourths

2014 - Q46

What number does point N represent on the ruler below?



- $\mathbf{F} = 10\frac{3}{2}$
- **G**  $11\frac{1}{4}$
- H 11
- $J 11\frac{3}{4}$

\* Correct answer (F)

#### **Analysis of Assessed Standards**

Dual Coding	Content	Supporting
Duai Coung	Process	3.1(C)
Stimulus		
Thinking		
Related SEs		

Data Analysis						
Item	State	Local	Error Analysis			
F*	86		Guessing			
G	6		Careless Error			
Н	1		Stopped too Early			
J	5		☐Mixed Up Concepts			

#### Implications for Instruction/Notes

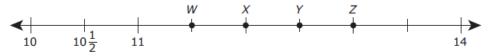
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**3.7(A) (New)** represent fractions of halves, fourths, and eighths as distances from zero on a number line

**3.10(A) (Old)** locate and name points on a number line using whole numbers and fractions, including halves and fourths



1 Which point best represents 13 on the number line below?



- A Point W
- B Point X
- C Point Y
- D Point Z

#### **Analysis of Assessed Standards**

Dual Coding	Content	Supporting
Duai Coung	Process	3.1(B)
Stimulus		
Thinking		

**Related SEs** 

Data Analysis						
Item	State	Local	Error Analysis			
Α	1		Guessing			
В	6		☐Careless Error			
С	3		Stopped too Early			
D*	90		☐Mixed Up Concepts			

Implications for Instruction/Notes

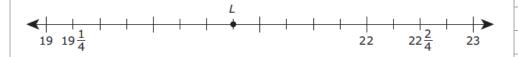
#### \* Correct answer (D)

3.7(A) (New) represent fractions of halves, fourths, and eighths as distances from

**3.10(A) (Old)** locate and name points on a number line using whole numbers and fractions, including halves and fourths

2013 - Q37

**37** What number does point *L* best represent on the number line below?



- A 21
- **B**  $21\frac{2}{4}$
- **c**  $20\frac{3}{4}$
- **D**  $20\frac{2}{4}$

\* Correct answer (C)

#### **Analysis of Assessed Standards**

Dual Coding	Content	Supporting
Duai Gourng	Process	3.1(B)
Stimulus		
Thinking		
Related SEs		

Data Analysis					
Item	State	Local	Error Analysis		
Α	11		Guessing		
В	20		Careless Error		
C*	59		Stopped too Early		
D	10		☐Mixed Up Concepts		

IQ Analysis   Investigating the Question	SE 3.7(B)	RC: 3
3.7(B)	Units:	

<b>3.7(B)</b> determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems	Analysis of Assessed Standards				
2015 – Sample Q21			Content	Readiness	
oro – Sample Qz i		Multi Coding		3.1(B), 3.1(E), 3.1(F)	
<b>21</b> The lengths of four sides of a polygon are shown in the diagram.					
	Stimulu	ıs			
7 units	Thinking				
8 units 8 units	Related SEs				
	Data Analysis				
The perimeter of the polygon is 40 units. What is the missing length in units?	Item	State	Local	Error Analysis	
	Α			Guessing Careless Error Stopped too Early Mixed Up Concepts	
A 8 units	B C*	NA			
<b>B</b> 15 units	D				
C 10 units					
	In	nplicati	ions for Ir	nstruction/Notes	
<b>D</b> 30 units					



<ul><li>3.7(B) (New) determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems</li><li>5.10(C) (Old) select and use appropriate units and formulas to measure length, perimeter, area, and volume</li></ul>		Analysis of Assessed Standards				
0044 00		D1 O		Content	Readiness	
2014 – Q2			Dual Coding		3.1(F)	
	ght a rectangular wall plate for an electrical outlet. A picture of the wall					
	own below. Use the ruler provided to measure the dimensions of the wall e nearest centimeter.	Stimul	us			
place to th	e nearest continuetor.	Thinkii	ng			
		Related	d SEs			
				Data Ar	acheic	
	Item	State	Local			
		F	3		Error Analysis  ☐Guessing	
		G	5		☐Careless Error	
		H*	88		☐Stopped too Early ☐Mixed Up Concepts	
		J	4		Шимой ор осноорю	
		Implications for Instruction/Notes				
			•			
Which mea	asurement is closest to the perimeter, in centimeters, of the wall plate?					
<b>F</b> 44 cm						
<b>G</b> 96 cm						
<b>H</b> 40 cm						
<b>J</b> 20 cm						

\* Correct answer (H)

<ul> <li>3.7(B) (New) determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems</li> <li>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</li> </ul>	Analysis of Assessed Standards			ssed Standards
			Content	Readiness
2014 – Q4		Dual Coding		3.1(B)
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	Stimulus			
nearest inch.	Thinkin	ng		
<del></del>	Related	l SEs		
This figure could be a —			Data A	nalysis
<b>F</b> square with a perimeter of 6 inches	Item F	State 18	Local	Error Analysis ☐Guessing
<b>G</b> triangle with a perimeter of 6 inches	G H*	11 68		☐Careless Error ☐Stopped too Early
<b>H</b> square with a perimeter of 12 inches	J	3		Mixed Up Concepts
J triangle with a perimeter of 12 inches	In	nplicati	ions for li	nstruction/Notes
* Correct answer (H)				



2.7/D) (Name) determine the project of a polymore are principal to other the principal						
<b>3.7(B) (New)</b> determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems			Analysis of Assessed Standards			
3.11(B) (Old) use standard units to find the perimeter of a shape						
2014 – Q28		Dual Coding		Readiness		
2011 420			Process	3.1(B)		
Steven has a wall decoration with a perimeter of 54 inches. Which figure could						
NOT represent Steven's wall decoration?	Stimulu	ıs				
	Thinkin	ıg				
18 in.	Related	I SEs				
F 9 in. 9 in.			Data Ar	nalvsis		
	Item	State	Local			
	F	12		Error Analysis  ☐Guessing		
18 in.	G	10		☐Careless Error		
	H*	69		Stopped too Early		
	J	8		☐Mixed Up Concepts		
24 in.						
	In	nnlicat	ions for In	struction/Notes		
<b>G</b> 6 in.	•••	прпсат	10113 101 11	istraction, ractes		
24 in.						
30 in.						
50 III.						
H 9 in. \ / 9 in.						
24 in.						
O in						
9 in.						
9 in. 9 in.						
J 〈						
9 in.						
9 in. 9 in.						
9 in.						
* Correct answer (H)						

3.7(B) (New) determine the perimeter of a polygor perimeter and remaining side lengths in problems 3.11(B) (Old) use standard units to find the perimeter of	3		Analysi	s of Asse	ssed Standards
			oding	Content	Readiness
2014 – Q34				Process	3.1(G)
Adam has 60 inches of ribbon. He wants to use the ril	bon to make a border				
around the perimeter of a rectangular picture. The dir shown below.	nensions of the picture are	Stimul	us		
		Thinkir	ng		
19 in.	٦	Related	d SEs		
		Item	State	Data Aı Local	nalysis
		F*	75	Local	Error Analysis ☐Guessing
	15 in.	G	13		☐Careless Error
	13 111.	Н	3		Stopped too Early
		J	8		☐Mixed Up Concepts
		_			
		Ir	nplicat	ions for Ir	nstruction/Notes
Does Adam have enough ribbon to make a border aro	und this picture?				
<b>F</b> No, because $19 + 19 + 15 + 15 = 68$ , and $68 > 60$	)				
<b>G</b> Yes, because $19 + 15 = 34$ , and $60 > 34$					
<b>H</b> No, because $19 + 19 + 19 + 19 = 76$ , and $76 > 60$	)				
<b>J</b> Yes, because $15 + 15 + 15 + 15 = 60$ , and $60 = 6$	0				
* Correct answer (F)					

<ul><li>3.7(B) (New) determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems</li><li>3.11(B) (Old) use standard units to find the perimeter of a shape</li></ul>		Analysis of Assessed Standards			
			Content	Readiness	
2014 – Q44	Dual Coding		Process	3.1(C)	
Melinda drew the figure shown below. Use the ruler provided to measure the length of each side of the figure to the nearest centimeter.	Stimulu	ıs			
	Thinkin	ıg			
	Related	l SEs			
			Data Aı	nalveis	
	Item	State	Local		
	F	5		Error Analysis  ☐Guessing	
	G*	78		☐Careless Error	
	Н	6		☐Stopped too Early ☐Mixed Up Concepts	
	J	9		□ Ivlixed op Coricepts	
	In	nplicati	ions for Ir	nstruction/Notes	
What is the perimeter in centimeters of the figure Melinda drew?					
<b>F</b> 45 cm					
<b>G</b> 31 cm					
<b>H</b> 36 cm					
<b>J</b> 26 cm					
* Correct answer (G)					



#### 3.7(B) (New) determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems **Analysis of Assessed Standards** 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 Content Readiness 2013 - Q10 **Dual Coding** Process 3.1(C) Use the ruler provided to measure the side lengths of the figures below to the Stimulus nearest centimeter. **Thinking Related SEs** Data Analysis Item State Local **Error Analysis** F ☐Guessing ☐Careless Error ☐Stopped too Early G 5 Н 15 ☐Mixed Up Concepts J\* 74 What is the difference between the perimeters of these figures? Implications for Instruction/Notes F 2 cm **G** 9 cm H 29 cm **J** 5 cm

<b>3.7(B) (New)</b> determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems			Analysis of Assessed Standards			
3.1	(B) (Old) use standard units to find the perim	eter of a shape				
201	3 – Q15		Dual Coding		Content	Readiness
20	o Qio				Process	3.1(B)
Th	e dimensions of two rectangles are sho	own below.	041 1			
			Stimulu	ıs		
	14 mm	28 mm	Thinkin	ng		
		17 mm	Related	l SEs		
	12 mm	17 11111			1	
					Data Ar	nalysis
	Rectangle Q	Rectangle R	Item	State	Local	Error Analysis
			Α	16		☐Guessing
W	ich statement about these rectangles	is true?	B*	47		Careless Error
			С	17		☐Stopped too Early ☐Mixed Up Concepts
Α	The perimeter of Rectangle Q is 19 mi Rectangle R.	llimeters less than the perimeter of	D	20		
	_		In	nplicat	ons for Ir	nstruction/Notes
В	<b>B</b> The perimeter of Rectangle Q is 38 millimeters less than the perimeter of Rectangle R.					
С	The perimeter of Rectangle Q is $14  \text{mi}$ Rectangle R.					
D	The perimeter of Rectangle Q is 42 mi Rectangle R.	llimeters less than the perimeter of				
* Co	rrect answer (B)					



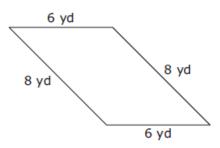
\* Correct answer (J)

#### 3.7(B) (New) determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems

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)

_		
Dual Coding	Content	Readiness
Duai Coung	Process	3.1(G)
Stimulus		
Thinking		
Related SEs		

**Analysis of Assessed Standards** 

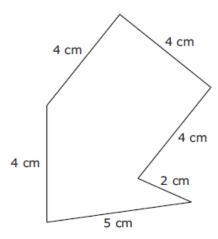
Data Analysis							
Item	State	Local	Error Analysis				
Α	6		Guessing				
В	9		☐Careless Error				
С	8		Stopped too Early				
D*	77		☐Mixed Up Concepts				

### Implications for Instruction/Notes

#### 3.7(B) (New) determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems 3.11(B) (Old) use standard units to find the perimeter of a shape

2013 - Q35

The side lengths of a figure are shown below.



What is the perimeter of the figure in centimeters?

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

\* Correct answer (23)

#### **Analysis of Assessed Standards**

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

Data Analysis								
Item	State	Local	Error Analysis					
	84		Guessing					
23	16		Careless Error					
23	0		☐Stopped too Early ☐Mixed Up Concepts					
	0		Livilxed op Concepts					



# IQ Analysis | Investigating the Question 3.7(C) determine the solutions to problems involving addition and subtraction of time intervals in minutes using pictorial models or tools such as a 15-minute event plus a 30-minute event equals 45 minutes SE 3.7(C) RC: 3

No test questions 2013 – 2015

10 Analysis   Investigating the Question			3E 3.1	(0)	KC. 3
3.7(D)			Units:		
<b>3.7(D)</b> determine when it is appropriate to use measurements of liquid volume (capacity) or weight	,	Analysi	s of Asse	ssed St	andards
2015 – Sample Q22	Multi Coding		Content	<b>Content</b> Supporting	
			Process	3.1(A), 3.1(F)	, 3.1(B), 3.1(C),
22 Olga uses the same amount of water to fill her water bottle every day. Which unit of measurement should Olga use to measure the amount of water in her water bottle?	Stimul	ıs			
A Pound	Thinkir	ıg			
	Related	l SEs			
B Fluid ounce			<u> </u>		
C Yard			Data Ar	nalysis	
<b>D</b> Ounce	Item	State	Local		Analysis
<b>b</b> ounce	A B*			Gue	essing eless Error
	C	NA		_	oped too Early
	D			□Mixe	ed Up Concepts
			ions for Ir	ıstructi	on/Notes
	Ir	nplicat	10113 101 11		
	Ir	nplicat	10113 101 11		
	Ir	nplicat	10113 101 11		
	lr.	nplicat	10113 101 11		
* Correct answer (B)	Ir	nplicat	10113 101 11		

IQ Analysis   Investigating the Question	SE 3.7(E)	RC: 3
3.7(E) determine liquid volume (capacity) or weight using appropriate units and tools	Units:	

No test questions 2013 – 2015



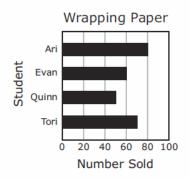
2 0/A)

3.8(A) Units:

**3.8(A)** summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals

#### 2015 - Sample Q23

23 The graph shows the number of rolls of wrapping paper sold by four students.



Which table represents the information in the graph?

#### Wrapping Paper

Student	Number Sold
Ari	80
Evan	60
Quinn	50
Tori	70

#### Wrapping Paper

Student	Number Sold
Ari	80
Evan	60
Quinn	40
Tori	60

#### Wrapping Paper

	Student	Number Sold	
С	Ari	80	
	Evan	60	
	Quinn	45	
	Tori	65	

#### Wrapping Paper

	Student	Number Sold	
D	Ari	80	
	Evan	60	
	Quinn	60	
	Tori	80	

## \* Correct answer (A)

В

Analysis of Assessed Standards							
Multi C	odina	Content	Readiness				
Muiti C	Multi Coding		3.1(A), 3.1(B), 3.1(D), 3.1(F)				
041							
Stimul	ıs						
Thinkir	ng						
Related	d SEs						
'							
Data Analysis							
Item	State	Local	Error Analysis				
<b>A</b> *			Guessing				

#### Implications for Instruction/Notes

В

С

D

NA

Careless Error

☐Stopped too Early

☐Mixed Up Concepts

3.8(A) (New) summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals **Analysis of Assessed Standards** 5.13(C) (Old) graph a given set of data using an appropriate graphical representation such as a picture or line graph. Content Readiness **Dual Coding** 2014 - Q18 **Process** Isaiah bought three kinds of fruit at the store. **Stimulus** · He bought 4 apples. **Thinking**  He bought 3 times as many oranges as apples. **Related SEs** • He bought 4 more peaches than apples. Which graph represents the fruit Isaiah bought? **Data Analysis** Item State Local **Error Analysis** F ☐Guessing Shopping for Fruit ☐Careless Error ☐Stopped too Early G 29 Н 1 Shopping for Fruit **Number Bought** ☐Mixed Up Concepts J\* 64 10 Apple 0000 8 Implications for Instruction/Notes Orange 6 Peach 4 Each () represents 2 pieces 2 of fruit. Apple Orange Peach Fruit Shopping for Fruit Shopping for Fruit Apple Orange G Peach 4 2 Each O represents 4 pieces of fruit. Apple Orange Peach Fruit \* Correct answer (J)

3.8(A) (New) summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals **Analysis of Assessed Standards** 3.13(A) (Old) collect, organize, record, and display data in pictographs and bar graphs where each picture or cell might represent more than one piece of data Content Readiness 2014 - Q29 **Dual Coding Process** 3.1(A) The table below shows the number of each kind of tree at a school. **Stimulus** Trees at School **Thinking** Number of **Related SEs** Kind of Tree Trees Pine 16 **Data Analysis** Item State Local Oak 6 **Error Analysis** 18 ☐Guessing Maple ☐Careless Error ☐Stopped too Early В 2 Willow 4 С 7 ☐Mixed Up Concepts 22 Elm D\* 86 Implications for Instruction/Notes Which graph best represents the information in the table? Trees at School Trees at School  $\mathcal{A} \mathcal{A} \mathcal{A} \mathcal{A}$ Pine Pine Óak Oak A C ନୁକୁକୁକୁ Maple Maple Willow Willow AAAAAAAElm Elm Each 💮 means 4 trees. Each Reans 4 trees. Trees at School Trees at School В

Pine	<i>କୁକୁକୁକୁ</i>
Oak	<b>P</b>
Maple	주주주주
Willow	<del>-</del>
Elm	$\varphi \varphi \varphi \varphi \varphi$
$\sim$	

Each 🏠 means 4 trees.

\* Correct answer (D)

	Pine	$\varphi \varphi \varphi \varphi$
	Oak	4
D	Maple	<i>କୁକୁକୁ</i> ନ୍
	Willow	<u>۾</u>
	Elm	$\varphi \varphi \varphi \varphi \varphi \varphi \zeta$

Each means 4 trees.

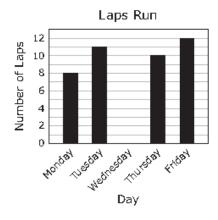


# 3.8(A) (New) summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals

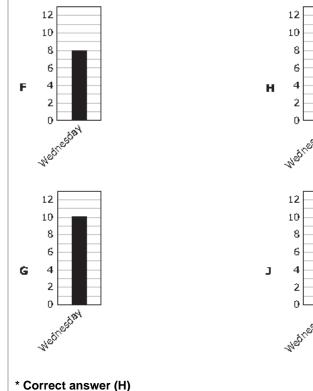
**3.13(A) (Old)** collect, organize, record, and display data in pictographs and bar graphs where each picture or cell might represent more than one piece of data

#### 2014 - Q40

Wakiko ran laps around her school on five days last week. The graph below shows the number of laps Wakiko ran on some of those days. The bar for the number of laps she ran on Wednesday is missing.



Wakiko ran a total of 50 laps on these five days. Which bar completes the graph?



# **Analysis of Assessed Standards**

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

Data Analysis								
Item	State	Local	Error Analysis					
F	10		Guessing					
G	11		☐Careless Error					
H*	66		Stopped too Early					
J	12		☐Mixed Up Concepts					



3.8(A) (New) summarize a data set with multiple table, dot plot, pictograph, or bar graph with sca 5.13(C) (Old) graph a given set of data using an apparas a picture or line graph.	aled interv	als .		Analysi	s of Asse	ssed Standards
				Dual Coding	Content	Readiness
2013 – Q2	2013 – Q2					
The table below shows the number of people who	went to a	movie each night	on four			
nights.				Stimulus		
People at a Movi	e			Thinking		
Night 1 2	3 4			Related SEs		
Number of 75 200 1	25 175				Data Aı	nalysis
People 73 200 I	23 1/3			Item State	Local	Error Analysis
Which graph represents the data in the table?				F* 95 G 1		☐Guessing ☐Careless Error
3 op				H 2		☐Stopped too Early ☐Mixed Up Concepts
People at a Movie	Peo	ple at a Movie	ı	J 2		
1	Night 1	웃 웃 웃		Implicat	ions for Ir	nstruction/Notes
F E 2 H	Night 2	<del>ያ ያ ያ ያ</del>				
F Z 3	Night 3	<u> </u>				
0 50 100 150 200 250	Night 4	* * * * * * * * * *				
Number of People	Each 웃 repre	sents 25 people.				
People at a Movie	Peo	ple at a Movie	ı			
1	Night 1	옷 :				
<b>G</b> E 3	Night 2	옷 옷 옷 옷				
G ž <sub>3</sub>	Night 3	<u> </u>				
0 50 100 150 200 250	Night 4	옷 옷 5				
Number of People	Each 옷 repre	sents 50 people.	1			

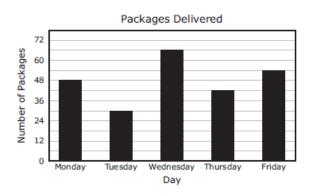
\* Correct answer (F)

3.8(A) (New) summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals

3.13(A) (Old) collect, organize, record, and display data in pictographs and bar graphs where each picture or cell might represent more than one piece of data

#### 2013 - Q4

The graph below shows the number of packages Blanca delivered on five days.



Which table best represents the information in the graph?

#### Packages Delivered

F	Day	Monday	Tuesday	Wednesday	Thursday	Friday
	Number of Packages	48	30	66	54	42

#### Packages Delivered

G	Day	Monday	Tuesday	Wednesday	Thursday	Friday
	Number of Packages	48	36	72	48	60

#### Packages Delivered

Day	,	Monday	Tuesday	Wednesday	Thursday	Friday
	nber of kages	48	30	66	42	54

#### Packages Delivered

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Number of Packages	48	30	42	66	54

#### \* Correct answer (H)

Н

J

#### **Analysis of Assessed Standards**

Process	3.1(A)

	Data Analysis						
Item	State	Local	Error Analysis				
F	5		Guessing				
G	6		☐Careless Error				
H*	86		Stopped too Early				
J	3		☐Mixed Up Concepts				

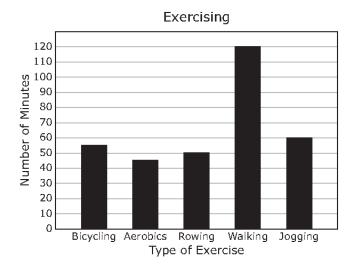
3.8(B)

Units:

**3.8(B) (New)** solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals **4.13(B) (Old)** interpret bar graphs

#### 2014 - Q9

Evan tries to burn 500 calories each time he exercises. The graph below shows the number of minutes that each type of exercise must be done in order to burn 500 calories.



Based on the graph, how many more minutes of walking than aerobics must Evan do in order to burn 500 calories?

- **A** 75 min, because 120 45 = 75
- **B** 165 min, because 120 + 45 = 165
- **C** 80 min, because 120 40 = 80
- **D** 170 min, because 120 + 50 = 170
- \* Correct answer (A)

#### **Analysis of Assessed Standards**

Dual Coding	Content	Supporting
Dadi Coding	Process	3.1(G)
Stimulus		
Thinking		
Related SEs		

	Data Analysis							
Item	State	Local	Error Analysis					
<b>A</b> *	73		Guessing					
В	12		Careless Error					
С	7		Stopped too Early					
D	8		☐Mixed Up Concepts					

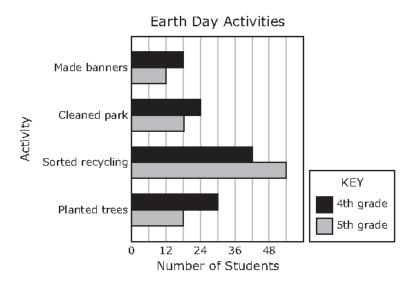


3.8(B) (New) solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals 3.13(B) (Old) interpret information from pictographs and bar graphs							Analysis	s of Asses	ssed Standards
2014 022						Dual Coding		Content	Supporting
2014 – Q23	2014 — Q23								3.1(A)
The graph be during four n		e number of	minutes Ryar	n spent doing	homework	Stimul	us		
		Homewo	ork Time			Thinkir	ng		
				8	1	Related	d SEs		
								Doto A	a a lucio
				$\bigcirc$		Item	State	Data Ar Local	
	6		<b>C</b>	6			67		Error Analysis  ☐Guessing
			<u> </u>	<b>**</b>		85	32		☐Careless Error
		<b>(2)</b>		<u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>			0		☐Stopped too Early ☐Mixed Up Concepts
							0		
						Ir	nplicati	ions for Ir	nstruction/Notes
	Monday	Tuesday	Wednesday	Thursday	_				
1	Each ሺ mea	ns 10 minute	s.						
How many m combined?	inutes did Rya	an spend doi	ng homework	on Tuesday	and Thursday				
Record your a use the corre			les on your a	nswer docun	nent. Be sure to				
* Correct answ	ver (85)								

**3.8(B) (New)** solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals **4.13(B) (Old)** interpret bar graphs

#### 2014 - Q25

The graph below shows the numbers of 4th-grade and 5th-grade students who participated in different Earth Day activities at a school. Each student participated in only one activity.



Based on the graph, which statement is true?

- **A** There were 12 more 4th-grade students than 5th-grade students who participated in Earth Day activities.
- **B** A total of 84 of these students sorted recycling.
- **C** There were 24 more 4th-grade and 5th-grade students who planted trees than who made banners.
- **D** A total of 36 students participated in Earth Day activities.

#### \* Correct answer (A)

#### **Analysis of Assessed Standards**

Dual Coding	Content	Supporting
- Dual County	Process	3.1(B)
	1	
Stimulus		
Thinking		
Related SEs		

ı		Data Analysis							
	Item	State	Local	Error Analysis					
	<b>A</b> *	59		Guessing					
	В	13		Careless Error					
	С	22		Stopped too Early					
	D	5		☐Mixed Up Concepts					



3.8(B) (New) solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals
3.13(B) (Old) interpret information from pictographs and bar graphs

2014 – Q32

The graph below shows the number of students at different grade levels who brought projects for a science fair.

Science Fair Projects

Related SEs

Data Analysis

Data Analysis

		Science run rrojects
ents	80	
ğ	ου	
f Stu	60	
er o	40	
Number of Students	20	
Z	0	
		Second Third Fourth Fifth
		Grade

Based on the graph, which statement is true?

- **F** A total of 110 students in second grade and fourth grade brought a project.
- **G** Exactly 40 fewer fourth-grade students brought a project than third-grade and fifth-grade students combined.
- **H** A total of 220 students in these grades brought a project.
- **J** Exactly 90 fewer third-grade students brought a project than fourth-grade and fifth-grade students combined.

#### \* Correct answer (G)

<b>Dual C</b>	oding		Supporting
_		Process	3.1(A)
Stimul	us		
Thinkiı	ng		
Related	d SEs		
		Data Aı	nalysis
		Local	<b>j</b>
Item	State	Local	Funcia Amelia
Item F	State 15	Local	Error Analysis
	0.0	Local	Error Analysis ☐Guessing ☐Careless Error
F	15	Local	☐Guessing ☐Careless Error ☐Stopped too Early
F G*	15 43	Local	☐Guessing ☐Careless Error



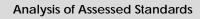
3.8(B) (New) solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals **Analysis of Assessed Standards** 3.13(B) (Old) interpret information from pictographs and bar graphs Content Supporting **Dual Coding** 2013 - Q28 **Process** 3.1(B) The graph below shows the number of goals four players scored during a soccer **Stimulus Thinking** Goals Scored **Related SEs** Bryan **Data Analysis** Player Elizabeth Item State Local **Error Analysis** 70 ☐Guessing Jacquee ☐Careless Error ☐Stopped too Early G 2 18 Н Vance Mixed Up Concepts J 10 10 40 0 Implications for Instruction/Notes Number Scored Based on the graph, what is the difference between the number of goals Vance scored and the number of goals Elizabeth scored? F 15 **G** 3 **H** 20

J 10

\* Correct answer (F)

**3.8(B) (New)** solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals **4.13(B) (Old)** interpret bar graphs

The graph below shows the number of cans of different types of vegetables on a

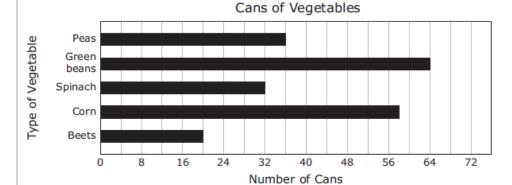


Dual Coding	Content	Supporting	
-	Process	3.1(G)	

Stimulus

Thinking

Related SEs



Based on the graph,	how many	more cans	of corn	than cans	of peas are on the
shelf?					

- **F** 20, because 60 40 = 20
- **G** 16, because 50 40 = 16
- **H** 28, because 64 36 = 28
- **J** 22, because 58 36 = 22
- \* Correct answer (J)

2013 - Q28

grocery store shelf.

Data Analysis							
State	Local	Error Analysis					
13		Guessing					
5		Careless Error					
12		Stopped too Early					
70		☐Mixed Up Concepts					
	13 5 12	State         Local           13         5           12					

3.8(B) (New) solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals 3.13(A) (Old) collect, organize, record, and display data in pictographs and bar graphs where each picture or cell might represent more than one piece of data

#### **Analysis of Assessed Standards**

	Dual Coding	Content	Supporting
	Duai Coung	Process	3.1(B)

Stimulus
Thinking

Data Analysis

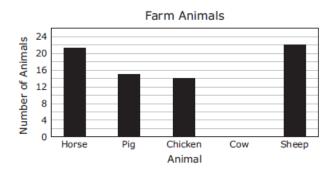
**Related SEs** 

		Data A	nalysis
Item	State	Local	Error Analysis
F	19		Guessing
G*	56		☐Careless Error
Н	16		Stopped too Early
J	8		☐Mixed Up Concepts

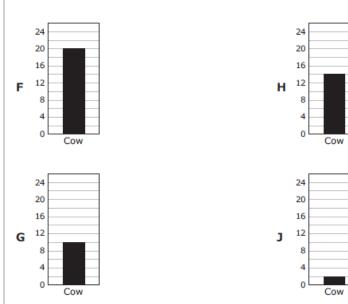
#### Implications for Instruction/Notes

#### 2013 - Q38

The graph below shows the number of each kind of animal on a farm. The bar for the number of cows on the farm is missing.



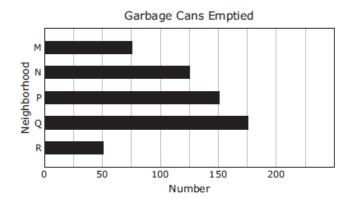
There is a total of 82 animals on the farm. Which bar completes the graph?



**3.8(B) (New)** solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals **6.10(D) (Old)** solve problems by collecting, organizing, displaying, and interpreting data

#### 2013 - Q39

The graph below shows the number of garbage cans that were emptied in five neighborhoods.



Which statement is best supported by the information in the graph?

- A total of 500 garbage cans were emptied in these 5 neighborhoods.
- B The combined number of garbage cans emptied in Neighborhood M and Neighborhood N is 50 more than the number of garbage cans emptied in Neighborhood P.
- C The difference between the greatest number of garbage cans emptied and the least number of garbage cans emptied is 110.
- D The combined number of garbage cans emptied in Neighborhood P and Neighborhood Q is 375 more than the number of garbage cans emptied in Neighborhood R.

#### \* Correct answer B)

#### **Analysis of Assessed Standards**

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

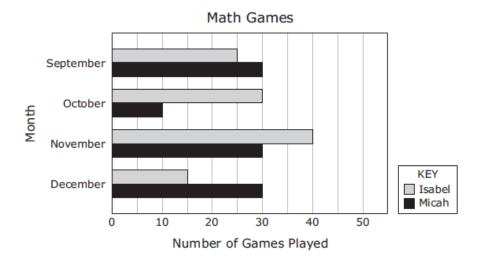
			Data A	nalysis
	Item	State	Local	Error Analysis
ľ	Α	10		Guessing
	В*	62		Careless Error
	С	C 11		Stopped too Early
	D	17		☐Mixed Up Concepts



3.8(B) (New) solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals 4.13(B) (Old) interpret bar graphs

2013 – Q40

The graph below shows the number of math games two people played on a computer during four months.



Based on the graph, which statement is true?

- F In September Micah played 5 fewer games than Isabel.
- G In October Isabel played 4 times as many games as Micah.
- H In November Isabel played 2 more games than Micah.
- J In December Micah played 2 times as many games as Isabel.

\* Correct answer (J)

Stimulus		
Dual County	Process	3.1(B)
Dual Coding	Content	Supporting

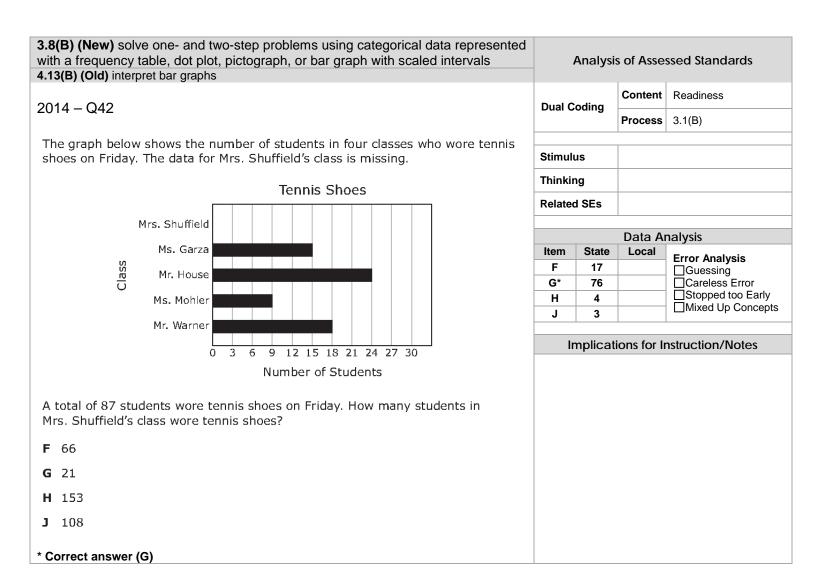
**Analysis of Assessed Standards** 

		Data A	nalysis
Item	State	Local	Error Analysis
F	20		Guessing
G	15		☐Careless Error
Н	18		Stopped too Early
J*	47		☐Mixed Up Concepts

**Thinking** 

**Related SEs** 





IQ Analysis   Investigating the Question	SE 3.9(A)	RC: 4
3.9(A) explain the connection between human capital/labor and income		

No test questions 2013 – 2015



IQ Analysis   Investigating the Question	SE 3.9(B)	RC: 4
3.9(B)	Units:	

		describe the relationship between the availability or scarcity of resources by that impacts cost		Analysi	s of Asses	ssed Standards		
201	15.	– Sample Q24	Multi Coding		Content	Supporting		
20	· •	- Sample Q24			Process	3.1(A), 3.1(B), 3.1(G)		
24	Ва	nd weather destroyed most of the peaches on the peach trees in an orchard.						
	Th	This will have an effect on the price of the remaining peaches. Which statement best describes the effect on the price?  • The price will likely increase because there are more peaches available to buy.		Stimulus Thinking Related SEs				
	A							
	В	The price will likely decrease, because there are more peaches available to			1			
		buy.		Data Analysis				
(	_	The price will likely increase these are fewer peaches available to	Item	State	Local			
	C	The price will likely increase, because there are fewer peaches available to buy.	Α			Error Analysis ☐Guessing		
			В	NA		Careless Error		
	D	The process of the control of the co	C*	l IVA		Stopped too Early		
		buy.	D			☐Mixed Up Concepts		
			Ir	nplicat	ions for Ir	nstruction/Notes		
* Co	orre	ect answer (C)						



and	<b>3.9(D)</b> explain that credit is used when wants or needs exceed the ability to pay and that it is the borrower's responsibility to pay it back to the lender, usually with interest			Analysis of Assessed Standards			
20°	2015 – Sample Q25		Multi Coding		Content Process	Supporting 3.1(A), 3.1(B), 3.1(G)	
25	Cla	aire borrowed \$20 from her mom in order to buy game tokens at a festival. Her					
	mom said Claire would have to pay the money back with interest. Which		Stimulus				
	Sto	statement best explains what Claire's mom meant?		Thinking			
	A	She expected Claire to pay back only the money she borrowed.	Related	d SEs			
	В	She expected Claire to pay back only part of the money she borrowed.					
	C	She expected Claire to keep the money she borrowed and not pay any of it back.		nalysis			
	_		Item	State	Local	Error Analysis	
	_	She expected Clairs to pay back the manay she harrowed plus an additional	A			☐Guessing_	
	U	She expected Claire to pay back the money she borrowed plus an additional amount of money.	В	NA		☐Careless Error ☐Stopped too Early	
			D*			☐Mixed Up Concepts	
			Ir	nplicat	ions for Ir	nstruction/Notes	
* Co	orre	ct answer (D)					

IQ Analysis   Investigating the Question	SE 3.9(E)	RC: 4
<b>3.9(E)</b> list reasons to save and explain the benefit of a savings plan, including for college	Units:	

No test questions 2013 – 2015



IQ Analysis   Investigating the Question				SE		RC:	
					Units:		
				Analysi	s of Asses	sed Stanc	lards
				-	Content		
		[	Dual Co	oding	D		
					Process		
			PLC fo	r PLC	Stimulus		
			Anal		Thinking		
		_			minking		
		F	Related	I SEs			
					Data An		
		s	SE Lev	evel Data		State	Local
			Item	State	Local	Error Typ	е
			A/F B/G C/H D/J			Procedu	ural
						☐Applica ☐Concep	tion tual
						Guessir	ng
				structiona	l Analysis		
	Evidence of			r to example	oo (towaht)		
			Eviueii Transfe		□Simila	res applicati	on (learned)
			Depth of				
* Correct answer	•				Level	1	Level 3 Level 4
		Knowledge		eage	☐ revei	<sup>2</sup>   <sup>L</sup>	Level 4
		0	Concept				
				Δnalvsi	s of Asses	sed Stanc	lards
				ruarysi	Content	sea starte	iuius
			Dual C	oding	Content		
					Process		
			PLC fo	* DI C	Stimulus		
		'	Anal		The inclusion on		
					Thinking		
		F	Related	l SEs			
					Data An	alysis	
		s	SELOV	el Data		State	Local
			OL LCV				
			Item	State	Local	Error Typ	е
			A/F			Procedu	ıral
			B/G C/H			☐Applica ☐Concep	
			D/J			Guessir	ng
			Dio	In	structiona	l Analysis	
		E	Eviden			r to example	as (taught)
			Transfe		Requi	res applicati	on (learned)
* Correct answer	•	[	Depth (	odae adae	Level	$\frac{1}{2}$	Level 3 Level 4
			Knowledge		- revei	<u> </u>	LUVUI 4
		0	Conce	ot			
		I			1		
				Analysi	s of Asses	sed Stanc	lards
					10000	- Ju June	,
So What?							
Now What?							