



2025 Released Tests

Aligned to the Standards

CONTENT BUILDER FOR THE PLC

Math Grade 6

IQ Analysis | Investigating the Question – Released Tests User Guide

Student Expectation/Reporting Category
DISCUSS: How many questions for this Student Expectation were asked over the past years? Which parts were assessed?

IQ Analysis Investigating the Question		SE #	RC #
Units			
SE # Student Expectation	Analysis of Assessed Standards		
! [Year] [Question #]	Cluster		
	Subcluster		
	Content		
	Process		
	Item Type		
	Stimulus		
	Data Analysis		
	Item	State	Local
Error Analysis			
☐ Guessing ☐ Stopped Too Early			
☐ Careless Error ☐ Mixed Up Concepts			
Learning from Mistakes			
Instructional Implications			
*Correct Answer			

Units
COMPLETE: Note the units in which the student expectation is taught.

Analysis of Assessed Standards
DISCUSS and NOTE: Review the cluster, subcluster, content/process standards, and item type assessed for each item.

Stimulus
COMPLETE: Note visual representation used.
DISCUSS and NOTE: How many different stimuli were used to assess this student expectation?

State-Level SE Data and Error Analysis
COMPLETE: Add local data for the item.
DISCUSS and NOTE: What are the most common error patterns?

Learning from Mistakes
DISCUSS and NOTE: What patterns in learning errors emerged across items? What is the best way to respond to those error patterns?

Instructional Implications
DISCUSS and NOTE: How will we adapt instruction to help students improve understanding and application of this student expectation?

In conjunction with the IQ analysis tool, the lead4ward field guides can be a helpful resource for understanding error patterns and instructional implications.

[Learn more](#)

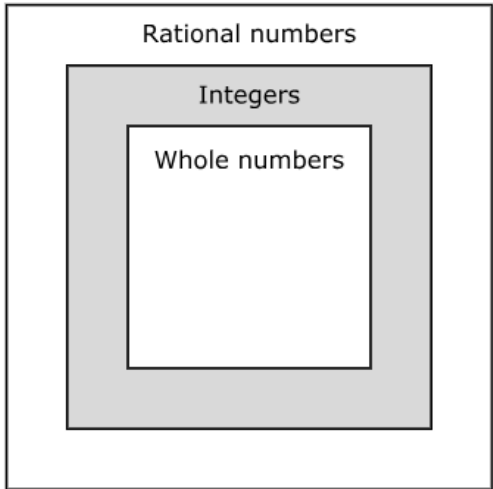
Representation and Comparison of Rational Numbers

6.2 Number and operations. The student applies mathematical process standards to represent and use rational numbers in a variety of forms.

6.2(A) classify whole numbers, integers, and rational numbers using a visual representation such as a Venn diagram to describe relationships between sets of numbers

2025 – Q7

The Venn diagram shows the relationship among three sets of numbers.



Which value would **NOT** be located in the shaded region of the diagram?

☐ A $-\frac{8}{2}$

☐ B -33

☐ C $\frac{11}{8}$

☐ D 2

*Correct Answer (C [TEA confirmed that answer choice D is also correct])
^highly chosen incorrect answer (D)

Analysis of Assessed Standards

Cluster	Representation and Comparison of Rational Numbers
Subcluster	Representation of Rational Numbers
Content	Supporting
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A		
B		
C*	42	
D	^	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

6.2(D) order a set of rational numbers arising from mathematical and real-world contexts

Analysis of Assessed Standards

2025 – Q11

Which number makes each inequality true?

Move the correct answer to each box. Not all answers will be used.

$\frac{1}{8}$

$-\frac{9}{2}$

0.025

1.9

-2.6 <

< $\frac{1}{10}$ <

< $\frac{12}{7}$

* Correct Answer (0.025; 1/8)

Cluster	Representation and Comparison of Rational Numbers
Subcluster	Comparison of Rational Numbers
Content	Readiness
Process	
Item Type	Drag and Drop (2 pts)
Stimulus	

Data Analysis		
Item	State	Local
Full Credit	29	
No Credit	40	
Partial Credit	32	

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

Learning from Mistakes Instructional Implications

6.2(D) order a set of rational numbers arising from mathematical and real-world contexts

2025 – Q33

Jamilla recorded the change in her dog’s weight in pounds each week for 5 weeks. The table shows her data.

Weight Change

Week	1	2	3	4	5
Change (pounds)	0.3	− 0.86	1.02	− $\frac{1}{4}$	0.18

Which list shows the data in order from least to greatest?

A

− 0.86 − $\frac{1}{4}$ 0.18 0.3 1.02

B

− $\frac{1}{4}$ − 0.86 0.18 0.3 1.02

C

0.18 − $\frac{1}{4}$ 0.3 − 0.86 1.02

D

0.3 − 0.86 − $\frac{1}{4}$ 0.18 1.02

* Correct Answer (A)

^highly chosen incorrect answer (B)

Analysis of Assessed Standards

Cluster	Representation and Comparison of Rational Numbers	
Subcluster	Comparison of Rational Numbers	
Content	Readiness	
Process		
Item Type	Multiple Choice (1 pt)	
Stimulus		
Data Analysis		
Item	State	Local
A*	56	
B	^	
C		
D		
Error Analysis		
☐ Guessing ☐ Mixed Up Concepts ☐ Careless Error ☐ Stopped Too Early		
Learning from Mistakes Instructional Implications		

All Operations with Rational Numbers

6.3 Number and operations. The student applies mathematical process standards to represent addition, subtraction, multiplication, and division while solving problems and justifying solutions.

Connected Knowledge and Skills 6.2

IQ Analysis Investigating the Question	6.2(B)	RC 1
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6.2(B) identify a number, its opposite, and its absolute value	Analysis of Assessed Standards		
2025 – Q18 What is the value of the expression shown? 6.28 (A) -62.8 (B) -6.28 (C) 6.28 (D) 62.8 * Correct Answer (C) ^highly chosen incorrect answer (B)	Cluster	All Operations with Rational Numbers	
	Subcluster	All Operations with Integers	
	Content	Supporting	
	Process		
	Item Type	Multiple Choice (1 pt)	
	Stimulus		
	Data Analysis		
	Item	State	Local
	A		
	B	^	
	C*	68	
	D		
	Error Analysis		
	☐ Guessing	☐ Mixed Up Concepts	
	☐ Careless Error	☐ Stopped Too Early	
	Learning from Mistakes Instructional Implications		

6.2(E) extend representations for division to include fraction notation such as a/b represents the same number as a ÷ b where b ≠ 0

 2025 – Q16

Liselle has 60 strawberries. She puts an equal number of strawberries into each of 4 baskets.
Which expression does **NOT** represent the number of strawberries Liselle puts into each basket?

☐ A $60 \div 4$

☐ B $\frac{4}{60}$

☐ C $4 \overline{)60}$

☐ D $\frac{60}{4}$

* Correct Answer (B)
^highly chosen incorrect answer (D)

Analysis of Assessed Standards

Cluster	All Operations with Rational Numbers
Subcluster	Multiplication and Division with Positive Rational Numbers
Content	Supporting
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A		
B*	61	
C		
D	^	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

6.3(D) add, subtract, multiply, and divide integers fluently

2025 – Q2

The manager of a pet store monitors the number of fish added to or removed from a tank each day over a seven-day period. Each number in the list represents the change in the number of fish in the tank for a day during that week.

+ 8 − 6 + 2 − 5 − 1 + 3 − 6

What number represents the total change in the number of fish in the tank?

☐ A − 5

☐ B 2

☐ C 5

☐ D − 2

* Correct Answer (A)
^highly chosen incorrect answer (C)

Analysis of Assessed Standards

Cluster	All Operations with Rational Numbers
Subcluster	All Operations with Integers
Content	Readiness
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A*	75	
B		
C	^	
D		

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

6.3(D) add, subtract, multiply, and divide integers fluently		Analysis of Assessed Standards		
2025 – Q24 What is the value of the expression shown? $-8(2-5)+3(-4)$ (A) - 33 (B) 12 (C) 33 (D) - 12 <				

6.3(E) multiply and divide positive rational numbers fluently

Analysis of Assessed Standards

2025 – Q12

Josette has 178 coins that are each worth \$0.05. What is the total value of Josette’s coins in dollars and cents?

- ☐ A \$8.90
- ☐ B \$356.00
- ☐ C \$35.60
- ☐ D \$890.00

Cluster	All Operations with Rational Numbers
Subcluster	Multiplication and Division with Positive Rational Numbers
Content	Readiness
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A*	64	
B		
C	^	
D		

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

* Correct Answer (A)
^highly chosen incorrect answer (C)

6.3(E) multiply and divide positive rational numbers fluently

! 2025 – Q20

What is the value of $\frac{8}{18} \div \frac{6}{12}$?

A $\frac{2}{9}$

B $\frac{9}{8}$

C $\frac{9}{2}$

D $\frac{8}{9}$

* Correct Answer (D)

^highly chosen incorrect answer (A)

Analysis of Assessed Standards

Cluster	All Operations with Rational Numbers	
Subcluster	Multiplication and Division with Positive Rational Numbers	
Content	Readiness	
Process		
Item Type	Multiple Choice (1 pt)	
Stimulus		
Data Analysis		
Item	State	Local
A	^	
B		
C		
D*	35	
Error Analysis		
☐ Guessing	☐ Mixed Up Concepts	
☐ Careless Error	☐ Stopped Too Early	
Learning from Mistakes Instructional Implications		

<https://iq.lead4ward.com/createiq.php>

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Proportional Reasoning

6.4 Proportionality. The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations.

6.5 Proportionality. The student applies mathematical process standards to solve problems involving proportional relationships.

6.4(B) apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates

2025 – Q6

A floor is made of green tiles and blue tiles. The ratio of green tiles to blue tiles is 7:13. The floor has a total of 3,000 tiles.

How many of the floor tiles are blue?

☐ Ⓐ 1,950

☐ Ⓑ 150

☐ Ⓒ 429

☐ Ⓓ 1,615

* Correct Answer (A)
^highly chosen incorrect answer (D)

Analysis of Assessed Standards

Cluster	Proportional Reasoning
Subcluster	Ratios/Rates
Content	Readiness
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A*	45	
B		
C		
D	^	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

6.4(B) apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates

2025 – Q25

Lianna charges an hourly rate for repairing computers. The table shows the amounts Lianna charged for different numbers of hours she worked.

Lianna’s Earnings	
Hours Worked	Amount Charged (dollars)
3	67.50
4.5	101.25
5	112.50
9	x

Based on the data in the table, what is the value of x, the amount Lianna would charge for a computer repair that takes 9 hours?

- ☐ Ⓐ \$123.75
- ☐ Ⓑ \$202.50
- ☐ Ⓒ \$146.25
- ☐ Ⓓ \$213.75

* Correct Answer (B)
^highly chosen incorrect answer (C)

Analysis of Assessed Standards		
Cluster	Proportional Reasoning	
Subcluster	Ratios/Rates	
Content	Readiness	
Process		
Item Type	Multiple Choice (1 pt)	
Stimulus		
Data Analysis		
Item	State	Local
A		
B*	58	
C	^	
D		
Error Analysis		
☐ Guessing	☐ Mixed Up Concepts	
☐ Careless Error	☐ Stopped Too Early	
Learning from Mistakes Instructional Implications		

IQ Analysis Investigating the Question	6.4(D)	RC 1
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6.4(D) give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients		Analysis of Assessed Standards		
2025 – Q3 A school counselor sorts 875 students into 35 classrooms with the same number of students in each classroom. Which rate best represents the relationship between the number of students and the number of classrooms? Ⓐ 25 classrooms per student Ⓑ 35 classrooms per student Ⓒ 25 students per classroom Ⓓ 35 students per classroom * Correct Answer (C) ^highly chosen incorrect answer (A)	Cluster	Proportional Reasoning		
	Subcluster	Ratios/Rates		
	Content	Supporting		
	Process			
	Item Type	Multiple Choice (1 pt)		
	Stimulus			
	Data Analysis			
	Item	State	Local	
	A	^		
	B			
	C*	78		
	D			
	Error Analysis			
	☐ Guessing		☐ Mixed Up Concepts	
	☐ Careless Error		☐ Stopped Too Early	
	Learning from Mistakes Instructional Implications			

6.4(E) represent ratios and percents with concrete models, fractions, and decimals

Analysis of Assessed Standards

2025 – Q1

In Mr. Jefferson’s class, 35% of the students play a sport after school. Which decimal represents 35%?

A 3.5

B 0.035

C 0.35

D 35

Cluster	Proportional Reasoning
Subcluster	Fractions/Decimals/Percents
Content	Supporting
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A	^	
B		
C*	85	
D		

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

* Correct Answer (C)
^highly chosen incorrect answer (A)

6.4(G) generate equivalent forms of fractions, decimals, and percents using real-world problems, including problems that involve money

Analysis of Assessed Standards

2025 – Q35

An organization held an event to raise money to build new playgrounds. At the event, the organization raised $\frac{5}{4}$ of its goal.

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

☐ Ⓐ 1.25

☐ Ⓑ 101%

☐ Ⓒ 0.8

☐ Ⓓ 120%

Cluster	Proportional Reasoning
Subcluster	Fractions/Decimals/Percents
Content	Readiness
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A*	72	
B		
C	^	
D	^	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

* Correct Answer (A)
^highly chosen incorrect answer (C,D)

IQ Analysis Investigating the Question	6.4(H)	RC 3
--	--------	------

6.4(H) convert units within a measurement system, including the use of proportions and unit rates

2025 – Q23

The length of a wall is 6 yards. Which measurements are equivalent to 6 yards? Select **TWO** correct answers.

☐ 2 feet

☐ 18 feet

☐ 9 feet

☐ 108 inches

☐ 216 inches

☐ 72 inches

***Correct Answer (2nd option; 5th option)**

Analysis of Assessed Standards

Cluster	Proportional Reasoning
Subcluster	Conversions
Content	Readiness
Process	
Item Type	Multiselect (2 pts)
Stimulus	

Data Analysis

Item	State	Local
Full Credit	51	
No Credit	14	
Partial Credit	36	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

6.5(A) represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions

Analysis of Assessed Standards

2025 – Q36

Skye is making a necklace. She uses 6 red beads and 10 black beads.

Which ratio represents the number of red beads to the number of black beads Skye uses?

☐ Ⓐ $\frac{5}{3}$

☐ Ⓑ $\frac{3}{5}$

☐ Ⓒ $\frac{3}{8}$

☐ Ⓓ $\frac{8}{3}$

Cluster	Proportional Reasoning
Subcluster	Ratios/Rates
Content	Supporting
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A		
B*	64	
C	^	
D		

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

* Correct Answer (B)
^highly chosen incorrect answer (C)

6.5(B) solve real-world problems to find the whole given a part and the percent, to find the part given the whole and the percent, and to find the percent given the part and the whole, including the use of concrete and pictorial models

Analysis of Assessed Standards

2025 – Q14

An employee's starting salary is \$36,000. The employee will receive a 3% increase in salary after completing several months of training.

What is the amount of the employee's salary increase after the training?

☐ Ⓐ \$10,800

☐ Ⓑ \$12,000

☐ Ⓒ \$1,080

☐ Ⓓ \$1,200

Cluster	Proportional Reasoning
Subcluster	Fractions/Decimals/Percents
Content	Readiness
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A		
B	^	
C*	31	
D		

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

*Correct Answer (C)
^highly chosen incorrect answer (B)

Expressions, Equations, and Inequalities

6.7 Expressions, equations, and relationships. The student applies mathematical process standards to develop concepts of expressions and equations.

6.9 Expressions, equations, and relationships. The student applies mathematical process standards to use equations and inequalities to represent situations.

6.10 Expressions, equations, and relationships. The student applies mathematical process standards to use equations and inequalities to solve problems.

IQ Analysis Investigating the Question	6.7(A)	RC 1
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6.7(A) generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization

2025 – Q28

Which value is equivalent to $5 - 2(3)^2 + 4$?

- A

- 27
- B

5
- C

- 9
- D

31

*Correct Answer (C)
^highly chosen incorrect answer (D)

Analysis of Assessed Standards

Cluster	Expressions, Equations, and Inequalities
Subcluster	Order of Operations
Content	Readiness
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A		
B		
C*	35	
D	^	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

IQ Analysis Investigating the Question	6.7(D)	RC 1
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6.7(D) generate equivalent expressions using the properties of operations: inverse, identity, commutative, associative, and distributive properties

! 2025 – Q30

Complete the sentence to make it true.
Move the correct answer to each box. Not all answers will be used.

7(x · 1)

7 ÷ x + 1

x(7 + 1)

$\frac{x}{7} + 1$

$\frac{7}{x} + 1$

The expressions and are equivalent.

*Correct Answer (7 ÷ x + 1; 7/x + 1)

Analysis of Assessed Standards		
Cluster	Expressions, Equations, and Inequalities	
Subcluster	Order of Operations	
Content	Readiness	
Process		
Item Type	Drag and Drop (1 pt)	
Stimulus		
Data Analysis		
Item	State	Local
Full Credit	28	
No Credit	72	
Error Analysis		
☐ Guessing	☐ Mixed Up Concepts	
☐ Careless Error	☐ Stopped Too Early	
Learning from Mistakes Instructional Implications		

6.9(A) write one-variable, one-step equations and inequalities to represent constraints or conditions within problems

2025 – Q17

Kevin has a maximum of \$28 to spend at a movie theater. He will spend \$15 on a movie ticket, and he can spend the rest of the money on popcorn and a drink.

Complete the inequality to represent all possible values of y , the amount in dollars that Kevin can spend on popcorn and a drink.

Move the correct answer to each box. Not all answers will be used.

-

+

<

>

≤

≥

15 y 28

*Correct Answer (+; ≤)

Analysis of Assessed Standards

Cluster	Expressions, Equations, and Inequalities
Subcluster	Representation and Solutions of Equations/Inequalities
Content	Supporting
Process	
Item Type	Drag and Drop (1 pt)
Stimulus	

Data Analysis

Item	State	Local
Full Credit	30	
No Credit	70	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

6.10(A) model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts

2025 – Q22

At a store, each avocado costs \$0.65. Which inequality represents the number of avocados, n , a customer can buy with \$10.00?

- ☒ A $0.65n \geq 10$
- ☐ B $10n \leq 0.65$
- ☐ C $0.65n \leq 10$
- ☐ D $10n \geq 0.65$

* Correct Answer (C)
^highly chosen incorrect answer (A)

Analysis of Assessed Standards

Cluster	Expressions, Equations, and Inequalities
Subcluster	Representation and Solutions of Equations/Inequalities
Content	Readiness
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A	^	
B		
C*	46	
D		

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

6.10(B) determine if the given value(s) make(s) one-variable, one-step equations or inequalities true

 2025 – Q4

Which inequality is true for all values of n where $n < -3$?

☐ $n + 5 < -6$

☐ $n + 5 > 3$

☐ $n + 5 < -1$

☐ $n + 5 < 3$

* Correct Answer (D)
^highly chosen incorrect answer (B)

Analysis of Assessed Standards

Cluster	Expressions, Equations, and Inequalities
Subcluster	Representation and Solutions of Equations/Inequalities
Content	Supporting
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A		
B	^	
C		
D*	35	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

Algebraic Representations

6.6 Expressions, equations, and relationships. The student applies mathematical process standards to use multiple representations to describe algebraic relationships.

6.11 Measurement and data. The student applies mathematical process standards to use coordinate geometry to identify locations on a plane.

Connected Knowledge and Skills 6.4

IQ Analysis Investigating the Question	6.4(A)	RC 2
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6.4(A) compare two rules verbally, numerically, graphically, and symbolically in the form of $y = ax$ or $y = x + a$ in order to differentiate between additive and multiplicative relationships

2025 – Q27

Which statements describe the relationships between x and y in these two equations?

$$y = 7x$$
$$y = x + 7$$

Select **TWO** correct answers.

- ☐ When x is a negative number, both values of y will be negative.
- ☐ The value of y in $y = 7x$ is 7 times the value of x , and the value of y in $y = x + 7$ is 7 more than the value of x .
- ☐ The value of y in both $y = 7x$ and $y = x + 7$ is 7 times the value of x .
- ☐ The value of y in $y = 7x$ is 7 more than the value of x , and the value of y in $y = x + 7$ is 7 times x .
- ☐ When x is a positive number, both values of y will be positive.

* **Correct Answer (2nd option; 5th option)**

Analysis of Assessed Standards

Cluster	Algebraic Representations
Subcluster	Linear Representations
Content	Supporting
Process	
Item Type	Multiselect (2 pts)
Stimulus	

Data Analysis

Item	State	Local
Full Credit	36	
No Credit	12	
Partial Credit	51	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

6.6(C) represent a given situation using verbal descriptions, tables, graphs, and equations in the form $y = kx$ or $y = x + b$

2025 – Q8

Which equation best represents the relationship between x and y in the table, and which equation best represents the relationship between x and y on the graph?

Move the correct answer to each box. Not all answers will be used.

$y = 2x$

$y = x - 6$

$x = \frac{1}{4}y$

$x = y - 2$

$y = \frac{x}{4}$

$y = x + 1$

x	y
8	2
12	3
16	4
24	6

Equation:

Equation:

* Correct Answer ($y = x/4$; $y = 2x$)

Analysis of Assessed Standards

Cluster	Algebraic Representations
Subcluster	Linear Representations
Content	Readiness
Process	
Item Type	Drag and Drop (2 pts)
Stimulus	

Data Analysis

Item	State	Local
Full Credit	43	
No Credit	28	
Partial Credit	29	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

IQ Analysis Investigating the Question	6.11(A)	RC 3
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6.11(A) graph points in all four quadrants using ordered pairs of rational numbers

!

2025 – Q10

Points *Q* and *V* are graphed on the same coordinate grid:

- Point *Q* is located at (2, -4).
- Point *V* is located 4 units from point *Q*.

Which ordered pair could represent the location of point *V*?

(A) (0, -2)

(B) (-2, -4)

(C) (-4, -4)

(D) (-2, 0)

*Correct Answer (B)

^highly chosen incorrect answer (D)

Analysis of Assessed Standards

Cluster	Algebraic Representations	
Subcluster	Coordinate Planes	
Content	Readiness	
Process		
Item Type	Multiple Choice (1 pt)	
Stimulus		

Data Analysis

Item	State	Local
A		
B*	50	
C		
D	^	

Error Analysis

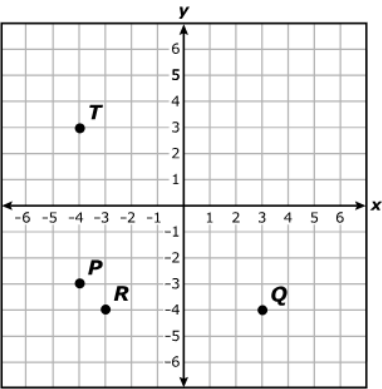
☐ Guessing	☐ Mixed Up Concepts
☐ Careless Error	☐ Stopped Too Early

Learning from Mistakes Instructional Implications

6.11(A) graph points in all four quadrants using ordered pairs of rational numbers

2025 – Q34

Which point on the coordinate grid is best represented by the ordered pair $(-3, -4)$?



☐ A Point *P*

☐ B Point *Q*

☒ C Point *R*

☐ D Point *T*

*Correct Answer (C)
^highly chosen incorrect answer (A)

Analysis of Assessed Standards

Cluster	Algebraic Representations
Subcluster	Coordinate Planes
Content	Readiness
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A	^	
B		
C*	76	
D		

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

Geometry and Measurement

6.8 Expressions, equations, and relationships. The student applies mathematical process standards to use geometry to represent relationships and solve problems.

Connected Knowledge and Skills 6.4

IQ Analysis Investigating the Question	6.4(H)	RC 3
--	--------	------

6.4(H) convert units within a measurement system, including the use of proportions and unit rates

2025 – Q23

The length of a wall is 6 yards. Which measurements are equivalent to 6 yards? Select **TWO** correct answers.

☐ 2 feet

☐ 18 feet

☐ 9 feet

☐ 108 inches

☐ 216 inches

☐ 72 inches

*Correct Answer (2nd option; 5th option)

Analysis of Assessed Standards

Cluster	Geometry and Measurement
Subcluster	Conversions
Content	Readiness
Process	
Item Type	Multiselect (2 pts)
Stimulus	

Data Analysis

Item	State	Local
Full Credit	51	
No Credit	14	
Partial Credit	36	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

IQ Analysis Investigating the Question	6.8(A)	RC 3
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6.8(A) extend previous knowledge of triangles and their properties to include the sum of angles of a triangle, the relationship between the lengths of sides and measures of angles in a triangle, and determining when three lengths form a triangle

2025 – Q31

Which set of measures could be the angle measures of a triangle?

- Ⓐ

25 °

25 °

90 °

Ⓑ

90 °

90 °

180 °

Ⓒ

45 °

45 °

45 °

Ⓓ

30 °

50 °

100 °

*Correct Answer (D)
^highly chosen incorrect answer (C)

Analysis of Assessed Standards		
Cluster	Geometry and Measurement	
Subcluster	Triangles	
Content	Supporting	
Process		
Item Type	Multiple Choice (1 pt)	
Stimulus		
Data Analysis		
Item	State	Local
A		
B		
C	^	
D*	41	
Error Analysis		
☐ Guessing	☐ Mixed Up Concepts	
☐ Careless Error	☐ Stopped Too Early	
Learning from Mistakes Instructional Implications		

6.8(C) write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers

 2025 – Q15

A parallelogram has an area of 33 square inches. The length of the base is b inches, and the height is h inches. Complete the equation that can be used to determine h , the height of the parallelogram in inches.

Enter your answer in the box provided.

$h =$

1	2	3	+	-	•	÷	
4	5	6	<	≤	=	≥	>
7	8	9	$\frac{\Box}{\Box}$	()			
	0		b				
.	-	$\frac{\Box}{\Box}$					

*Correct Answer (33/b or any equivalent expressions)

Analysis of Assessed Standards

Cluster	Geometry and Measurement
Subcluster	Area/Volume
Content	Supporting
Process	
Item Type	Equation Editor (1 pt)
Stimulus	

Data Analysis

Item	State	Local
Full Credit	13	
No Credit	87	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

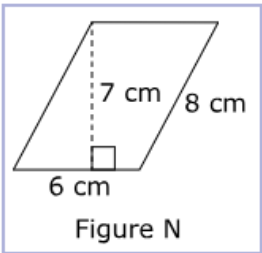
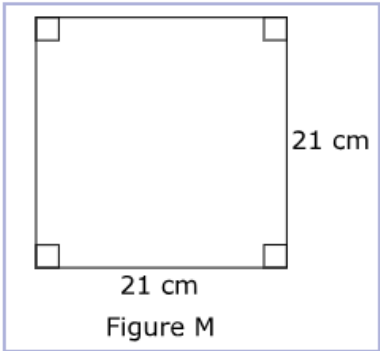
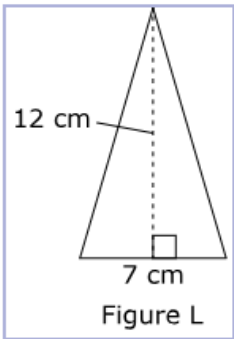
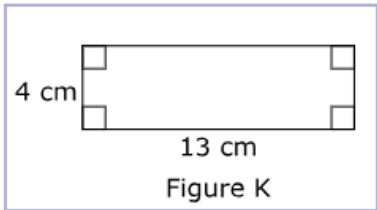
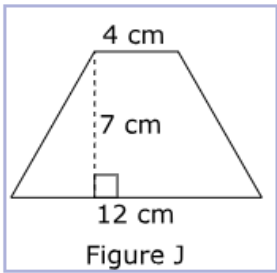
Learning from Mistakes
Instructional Implications

6.8(D) determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers

 2025 – Q21

Which figures have the same area in square centimeters?

Select **TWO** correct answers.



Not drawn to scale

***Correct Answer (Figure L; Figure N Parallelogram)**

Analysis of Assessed Standards

Cluster	Geometry and Measurement
Subcluster	Area/Volume
Content	Readiness
Process	
Item Type	Hot Spot (1 pt)
Stimulus	

Data Analysis

Item	State	Local
Full Credit	25	
No Credit	75	

Error Analysis

- ☐ Guessing
- ☐ Careless Error
- ☐ Mixed Up Concepts
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

Data Analysis

6.12 Measurement and data. The student applies mathematical process standards to use numerical or graphical representations to analyze problems.

6.13 Measurement and data. The student applies mathematical process standards to use numerical or graphical representations to solve problems.

IQ Analysis Investigating the Question	6.12(C)	RC 4
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6.12(C) summarize numeric data with numerical summaries, including the mean and median (measures of center) and the range and interquartile range (IQR) (measures of spread), and use these summaries to describe the center, spread, and shape of the data distribution

2025 – Q13

The list shows the time in seconds it took for each of 6 runners to complete a 100-meter sprint.

15.1 13.8 12.9 14.3 15.2 15.1

Complete the sentences to create true statements.

Move the correct answer to each box. Each answer may be used more than once. Not all answers will be used.

12.9 13.6 14.4 14.7 15.1 15.5

The mean sprint time is seconds.

The median sprint time is seconds.

*** Correct Answer (14.4; 14.7)**

Analysis of Assessed Standards		
Cluster	Data Analysis	
Subcluster	Measures of Data	
Content	Readiness	
Process		
Item Type	Drag and Drop (2 pts)	
Stimulus		
Data Analysis		
Item	State	Local
Full Credit	28	
No Credit	44	
Partial Credit	29	
Error Analysis		
☐ Guessing	☐ Mixed Up Concepts	
☐ Careless Error	☐ Stopped Too Early	
Learning from Mistakes Instructional Implications		

6.12(C) summarize numeric data with numerical summaries, including the mean and median (measures of center) and the range and interquartile range (IQR) (measures of spread), and use these summaries to describe the center, spread, and shape of the data distribution

2025 – Q19

The price of a concert ticket depends on the location of the seat. This list shows the ticket prices for different seats in dollars.

16 10 26 14 12 20 42 24 34

What is the range of the ticket prices?

- ☐ Ⓐ \$20
- ☐ Ⓑ \$32
- ☐ Ⓒ \$18
- ☐ Ⓓ \$22

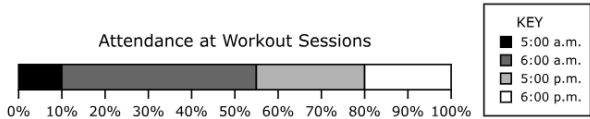
* Correct Answer (B)
^highly chosen incorrect answer (C)

Analysis of Assessed Standards		
Cluster	Data Analysis	
Subcluster	Measures of Data	
Content	Readiness	
Process		
Item Type	Multiple Choice (1 pt)	
Stimulus		
Data Analysis		
Item	State	Local
A		
B*	60	
C	^	
D		
Error Analysis		
☐ Guessing	☐ Mixed Up Concepts	
☐ Careless Error	☐ Stopped Too Early	
Learning from Mistakes Instructional Implications		

6.12(D) summarize categorical data with numerical and graphical summaries, including the mode, the percent of values in each category (relative frequency table), and the percent bar graph, and use these summaries to describe the data distribution

2025 – Q9

A coach offered student athletes a choice of four workout sessions. The percentage bar graph shows the percentage of student athletes who attended each workout session.



Which statement best supports the data in the percentage bar graph?

- ☐ Ⓐ More than half the students attended the 5:00 p.m. session.
- ☐ Ⓑ Fewer students attended a morning session (a.m.) than attended an afternoon session (p.m.).
- ☐ Ⓒ Fewer students attended the 6:00 p.m. session than attended the 5:00 p.m. session.
- ☐ Ⓓ More than twice as many students attended the 6:00 a.m. session as attended the 5:00 p.m. session.

* Correct Answer (C)
^highly chosen incorrect answer (D)

Analysis of Assessed Standards

Cluster	Data Analysis
Subcluster	Measures of Data
Content	Readiness
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A		
B		
C*	42	
D	^	

Error Analysis

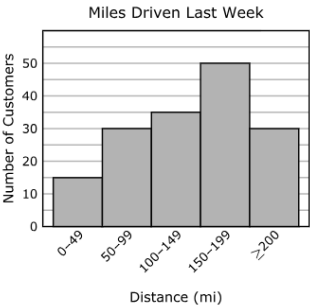
- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

6.13(A) interpret numeric data summarized in dot plots, stem-and-leaf plots, histograms, and box plots

2025 – Q29

The manager of a tire store asked customers how many miles they drove last week. The histogram shows the data collected.



Based on the histogram, which statement must be true?

- ☒ Ⓐ The number of customers who drove 150 miles or more is the same as the number of customers who drove less than 150 miles.
- ☐ Ⓑ More customers drove 50 miles than drove any other distance.
- ☐ Ⓒ The number of customers who drove 50 to 99 miles is less than the number of customers who drove 200 miles or more.
- ☐ Ⓓ More customers drove 30 miles than drove any other distance.

*** Correct Answer (A)**
^highly chosen incorrect answer (C)

Analysis of Assessed Standards

Cluster	Data Analysis
Subcluster	Representation/Interpretation of Data
Content	Readiness
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A*	55	
B		
C	^	
D		

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

Personal Financial Literacy

6.14 Personal financial literacy. The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor.

6.14(B) distinguish between debit cards and credit cards

2025 – Q5

Determine whether each statement describes a characteristic of a debit card or a credit card.
Select the correct answer in each row.

Statement	Debit Card	Credit Card
It builds credit history, which can positively affect a person's credit score.	☐	☐
The money used to purchase an item is automatically withdrawn from a bank account.	☐	☐
Each purchase is a loan and will need to be paid back in the future.	☐	☐
Consumers may be charged interest on their purchases.	☐	☐

*Correct Answer (Credit Card; Debit Card; Credit Card; Credit Card)

Analysis of Assessed Standards

Cluster	Personal Financial Literacy
Subcluster	Banking
Content	Supporting
Process	
Item Type	Match Table Grid (2 pts)
Stimulus	

Data Analysis

Item	State	Local
Full Credit	34	
No Credit	22	
Partial Credit	44	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes
Instructional Implications

6.14(C) balance a check register that includes deposits, withdrawals, and transfers

Analysis of Assessed Standards

2025 – Q32

Cluster	Personal Financial Literacy
Subcluster	Banking
Content	Supporting
Process	
Item Type	Drag and Drop (2 pts)
Stimulus	

The beginning balance in Ms. Kar’s checking account on August 22 was \$563.18. She made some withdrawals and deposits over the next few days but forgot to enter some of the information in her check register.

Which two amounts are missing from Ms. Kar’s check register?

Move the correct answer to each box in the table. Not all answers will be used.

7.89 12.11 51.36 513.18 613.18

Ms. Kar’s Check Register

Date	Description	Deposits (dollars)	Withdrawals (dollars)	Balance (dollars)
8/22				563.18
8/22	Phone bill		50.00	
8/23	Cash deposit	25.29		538.47
8/24	Cash deposit			546.36
8/24	Dinner out		51.36	495.00

Data Analysis		
Item	State	Local
Full Credit	43	
No Credit	23	
Partial Credit	34	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

Learning from Mistakes Instructional Implications

*Correct Answer (513.18; 7.89)

6.14(H) compare the annual salary of several occupations requiring various levels of post-secondary education or vocational training and calculate the effects of the different annual salaries on lifetime income

2025 – Q26

The average annual salaries for occupations in the media and communications field are shown in the table.

Media and Communications Annual Salaries

Occupation	Salary (dollars)
Journalist	62,400
Film and video editor	87,300
Technical writer	76,860
Sound engineering technician	67,090

Based on the information in the table, how much more money will a sound engineering technician earn over a period of 5 years than a journalist will?

☐ Ⓐ \$4,690

☐ Ⓑ \$129,490

☐ Ⓒ \$48,850

☐ Ⓓ \$23,450

*** Correct Answer (D)**
^highly chosen incorrect answer (B)

Analysis of Assessed Standards

Cluster	Personal Financial Literacy
Subcluster	Post-Secondary Education Planning
Content	Supporting
Process	
Item Type	Multiple Choice (1 pt)
Stimulus	

Data Analysis

Item	State	Local
A		
B	^	
C		
D*	51	

Error Analysis

- ☐ Guessing
- ☐ Mixed Up Concepts
- ☐ Careless Error
- ☐ Stopped Too Early

**Learning from Mistakes
Instructional Implications**

IQ Analysis Investigating the Question		SE	RC	
Units				
	Analysis of Assessed Standards			
	Cluster			
	Subcluster			
	Content			
	Process			
	Item Type			
	Stimulus			
	Data Analysis		Error Analysis	
	Item	State	Local	☐ Guessing
				☐ Careless Error
				☐ Stopped Too Early
				☐ Mixed Up Concepts
Learning from Mistakes				
Instructional Implications				
* Correct Answer ()				

		Analysis of Assessed Standards			
		Cluster			
		Subcluster			
		Content			
		Process			
		Item Type			
		Stimulus			
		Data Analysis		Error Analysis	
		Item	State	Local	☐ Guessing
					☐ Careless Error
					☐ Stopped Too Early
					☐ Mixed Up Concepts
		Learning from Mistakes			
Instructional Implications					
* Correct Answer ()					