Name: _____

New York State Testing Program

Mathematics Test
Session 1

Grade 8

Spring 2026

RELEASED QUESTIONS

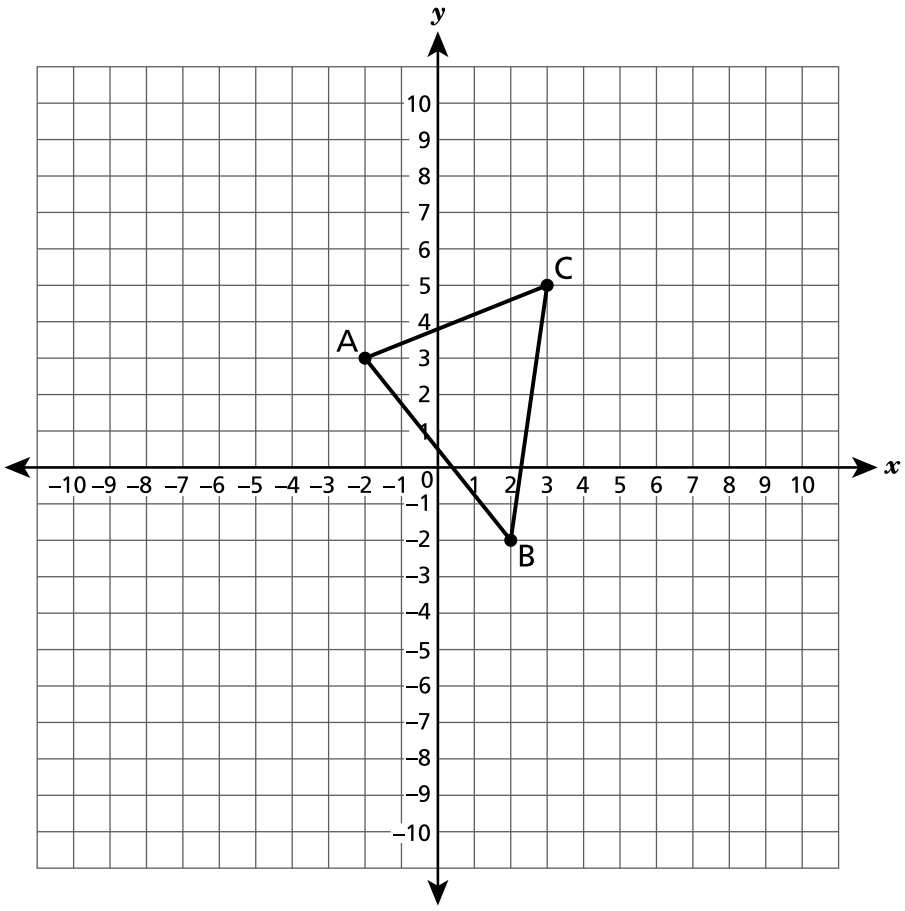
Session 1

TIPS FOR TAKING THE TEST

Here are some ideas to help you do your best:

- Read each question carefully. Take your time.
- You have a ruler, a protractor, a reference sheet, and a calculator that you can use on the test if they help you answer the question.

1 Triangle ABC is graphed on the coordinate plane shown below. Triangle ABC will be translated 4 units to the left and 2 units up to create triangle $A'B'C'$.



What will be the coordinates of vertex A' ?

A $(0, -1)$

B $(2, 1)$

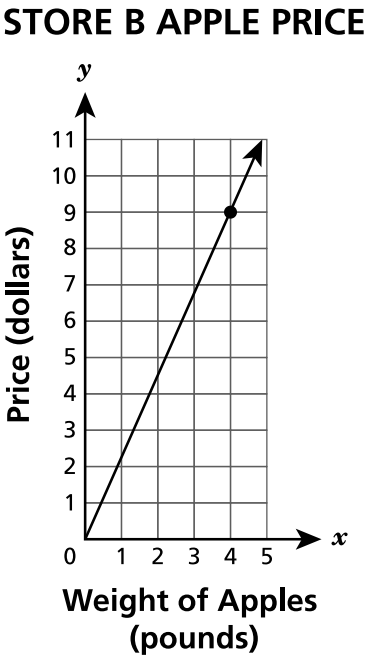
C $(-1, 7)$

D $(-6, 5)$

GO ON

2 Ms. Whitley is comparing the prices of apples, sold by the pound, at two different stores.

- The price, y, in dollars, of x pounds of apples sold at Store A is represented by the equation $y = 1.50x$.
- The price for a number of pounds of apples sold at Store B is represented by the graph shown below.



Which statement is true based on the information given?

A Store A charges $\$0.75$ more per pound.

B Store B charges $\$0.75$ more per pound.

C Store A charges $\$3.00$ more per pound.

D Store B charges $\$3.00$ more per pound.

3 Which expression is equivalent to $\frac{12^{20}}{12^{4}}$?

A 1^{5}

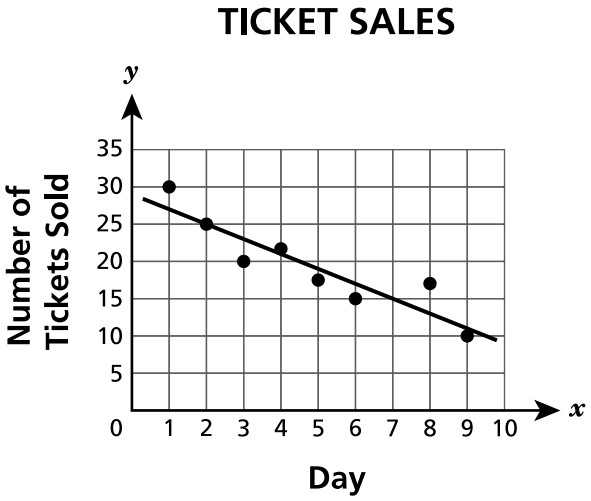
B 1^{16}

C 12^{5}

D 12^{16}

GO ON

4 A school sells tickets to a play. The data on the graph below shows the number of tickets sold, y, per day, x. The equation of the line $y = -2x + 29$ was drawn to best represent the relationship between the data.



Based on the equation of the line, which statement describes a valid prediction of ticket sales?

A Since the number of tickets approximately decreases by 29 a day, it can be predicted that 9 tickets will be sold on day 12.

B Since the number of tickets approximately decreases by 29 a day, it can be predicted that 5 tickets will be sold on day 12.

C Since the number of tickets approximately decreases by 2 a day, it can be predicted that 9 tickets will be sold on day 12.

D Since the number of tickets approximately decreases by 2 a day, it can be predicted that 5 tickets will be sold on day 12.

5 Which value is irrational?

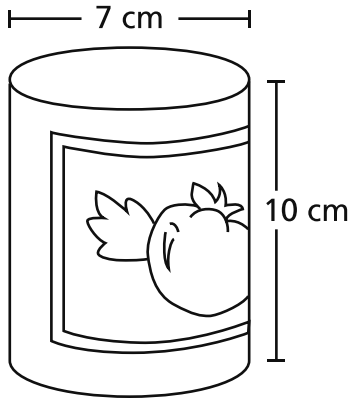
A 0

B π

C $\sqrt{9}$

D $\frac{1}{3}$

6 The dimensions of a can of tomatoes are shown in the diagram below.



What is the volume, to the nearest cubic centimeter, of the can?

A 110

B 220

C 385

D $1{,}539$

7 Triangle ABC has side lengths of 9 in., 12 in., and 15 in. Which equation proves that the triangle is a right triangle?

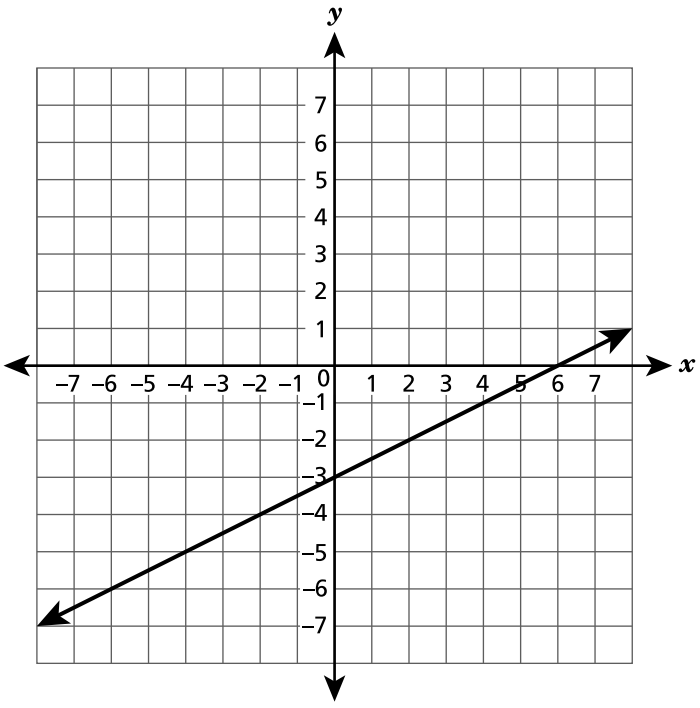
A $\sqrt{9} + \sqrt{12} = 15$

B $\sqrt{9} + \sqrt{12} = \sqrt{15}$

C $(9 + 12)^2 = 15^2$

D $9^2 + 12^2 = 15^2$

8 A line is graphed on the coordinate plane shown below.



Which equation represents the line shown on the coordinate plane?

A $y = \frac{1}{2}x - 3$

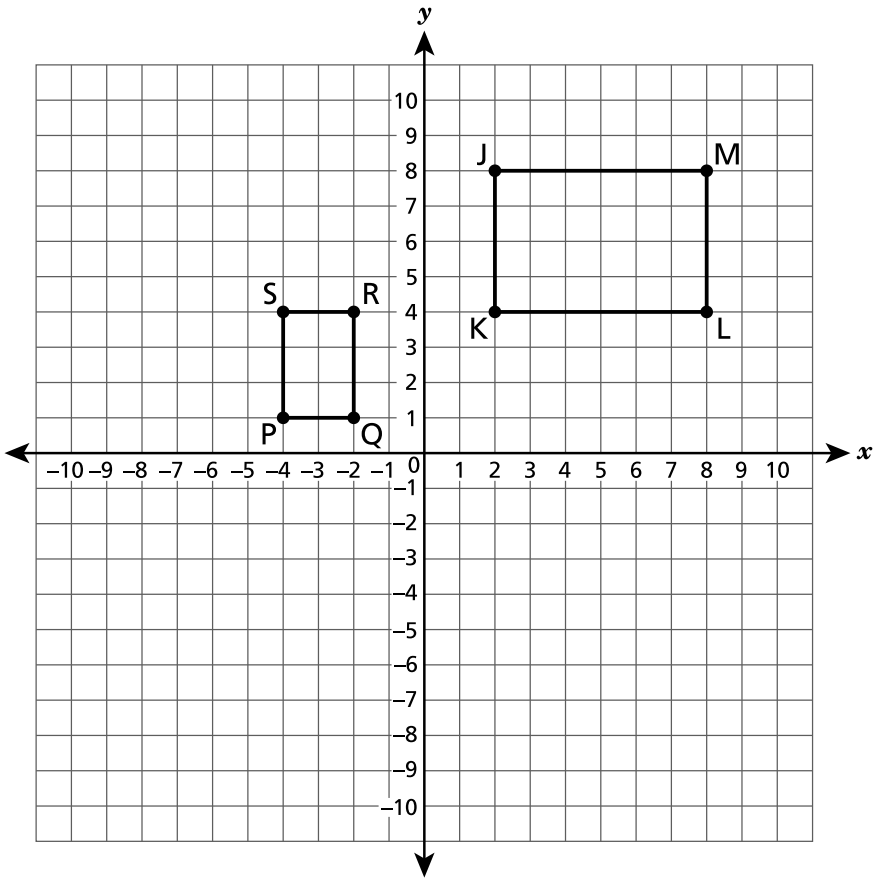
B $y = 3x - \frac{1}{2}$

C $y = -3x + 6$

D $y = -\frac{1}{2}x + 3$

GO ON

10 Rectangles JKLM and PQRS are shown on the coordinate plane below.



Which sequence of transformations can be used to show rectangle JKLM is similar but not congruent to rectangle PQRS ?

A A reflection of rectangle JKLM over the y axis, followed by a dilation by a scale factor of 2 centered at the origin.

B A reflection of rectangle JKLM over the y axis, followed by a dilation by a scale factor of $\frac{1}{2}$ centered at the origin.

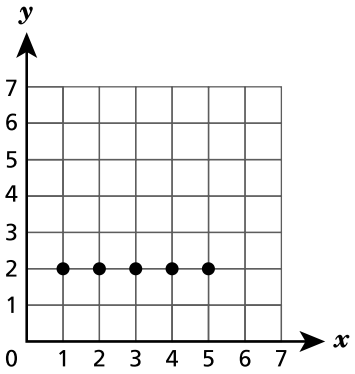
C A $90°$ counterclockwise rotation of rectangle JKLM about the origin, followed by a dilation by a scale factor of 2 centered at the origin.

D A $90°$ counterclockwise rotation of rectangle JKLM about the origin, followed by a dilation by a scale factor of $\frac{1}{2}$ centered at the origin.

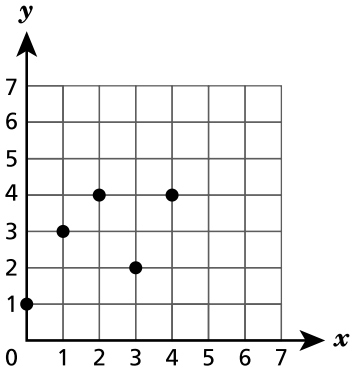
GO ON

11 Which relation is **not** a function?

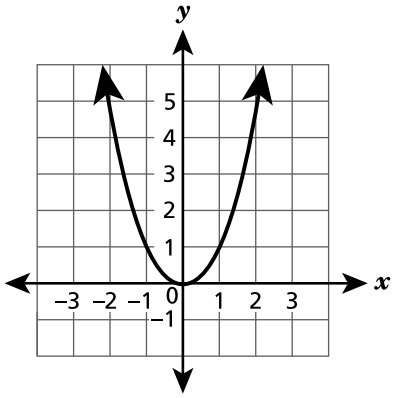
A



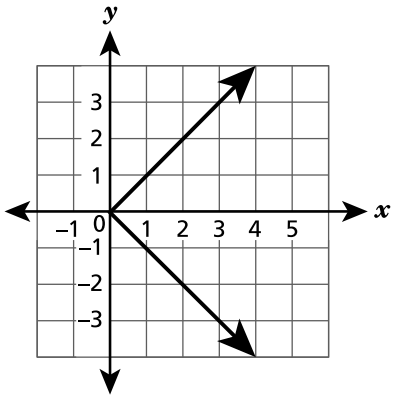
B



C



D



12 Which equation has an infinite number of solutions?

A $2x - 1 = 2(x - 1)$

B $2x - 2 = 2(x - 1)$

C $2x - 3 = 3(x - 1)$

D $2x + 3 = 3(x - 1)$

13 Which side lengths, in inches, will form a triangle?

A 3, 5, 10

B 4, 9, 14

C 5, 7, 10

D 6, 7, 14

14 Which equation represents a linear function?

A $y = 2x$

B $y = 2x^3$

C $y = x^2 - 2$

D $y = x^2 - x$

15 Which expression is equivalent to $(5^2)(7^{-2})(5^4)$?

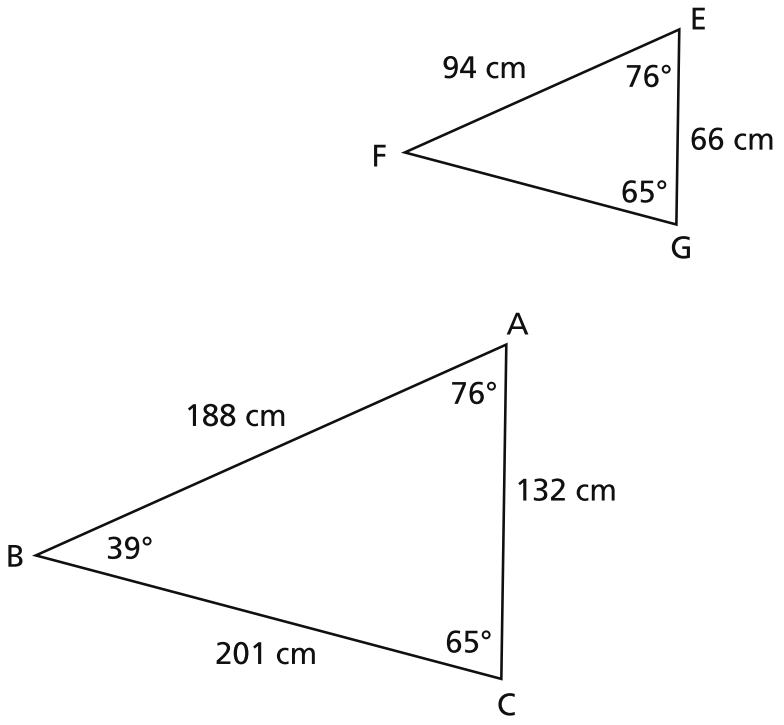
A $\frac{5^6}{7^2}$

B $\frac{25^6}{7^2}$

C 17^4

D 175^4

17 Triangle ABC and triangle EFG are shown below.



Which statement describes the measurements of angle F and side FG for triangle EFG ?

A Angle F is $39°$ and side FG is 201 cm.

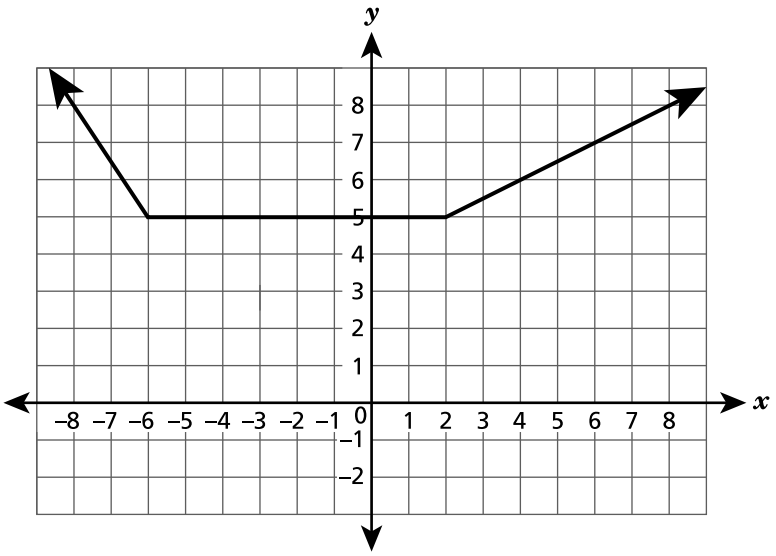
B Angle F is $19.5°$ and side FG is 201 cm.

C Angle F is $19.5°$ and side FG is 100.5 cm.

D Angle F is $39°$ and side FG is 100.5 cm.

GO ON

18 The graph of a function is shown below.



Which statement is true about the function?

A The function is constant when x is less than -6.

B The function is decreasing when x is greater than 2.

C The function is increasing when x is greater than 2.

D The function is decreasing when x is between the values of -6 and 2.

19 Myla sells hot chocolate at a fundraising event. The function $y = 3x + 30$ represents the total amount of money, y, she raises and includes the profit made by selling x cups of hot chocolate and a one time donation at the event. Which statement is true about the situation?

A The profit per cup is $\$3.00$ and the number of cups she sells is 30.

B The number of cups she sells is 3 and the profit per cup is $\$30.00$.

C The profit per cup is $\$3.00$ and the amount of the donation is $\$30.00$.

D The amount of the donation is $\$3.00$ and the profit per cup is $\$30.00$.

20 Which equation represents the line that passes through the points $(0,9)$ and $(3,0)$?

A $y = -3x + 3$

B $y = -3x + 9$

C $y = -\left(\frac{1}{3}\right)x + 3$

D $y = -\left(\frac{1}{3}\right)x + 9$

21 An equation is shown below.

$$3x - 2 = 7(x + 5)$$

What is the value of x ?

A $-\frac{37}{4}$

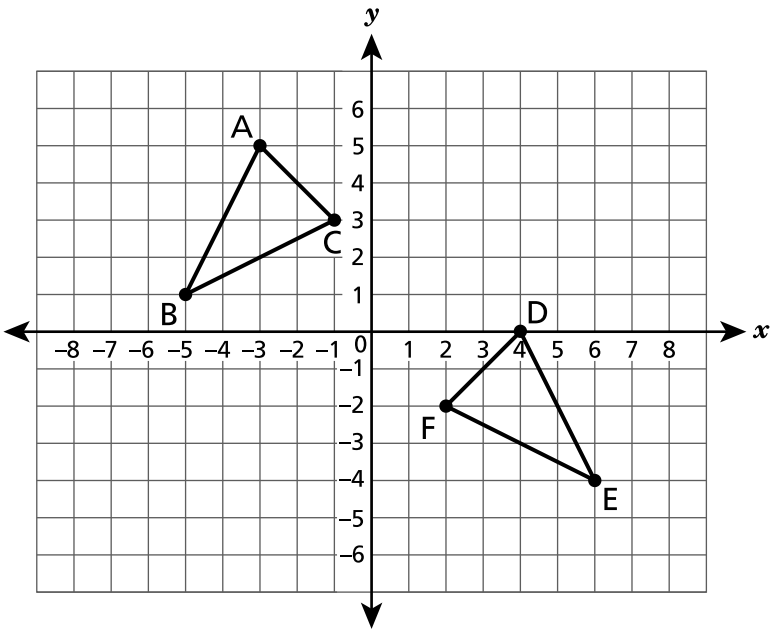
B $-\frac{7}{4}$

C $\frac{3}{10}$

D $\frac{33}{10}$

GO ON

22 Triangle ABC and triangle DEF shown on the coordinate plane below are congruent.



Which sequence of transformations will map triangle ABC onto triangle DEF ?

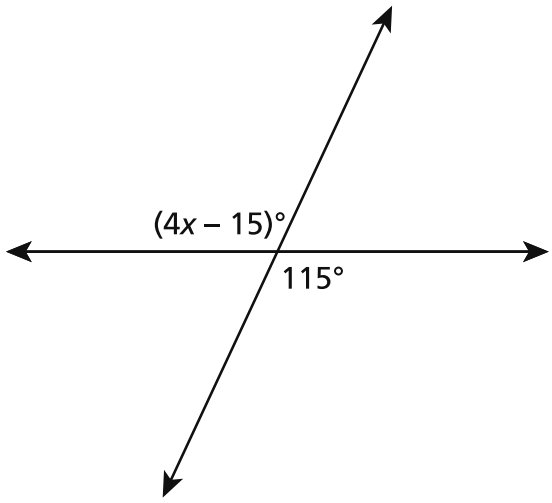
A a reflection over the x axis and then a translation 1 unit right and 5 units down

B a reflection over the x axis and then a translation 5 units right and 1 unit down

C a reflection over the y axis and then a translation 5 units right and 1 unit down

D a reflection over the y axis and then a translation 1 unit right and 5 units down

23 Two intersecting lines create the angles shown in the diagram below.



What is the value of x ?

A 20

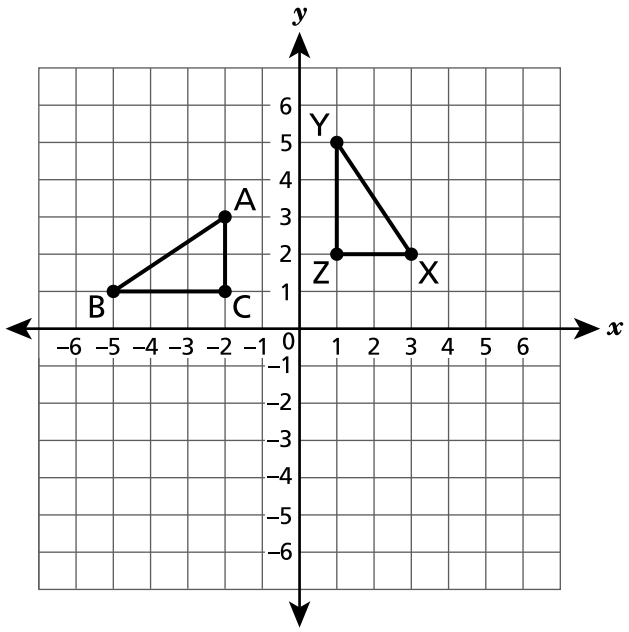
B 26.25

C 32.5

D 48.75

GO ON

25 Triangle ABC is rotated clockwise about the origin to create triangle XYZ as shown on the coordinate plane below.



Which statement is correct?

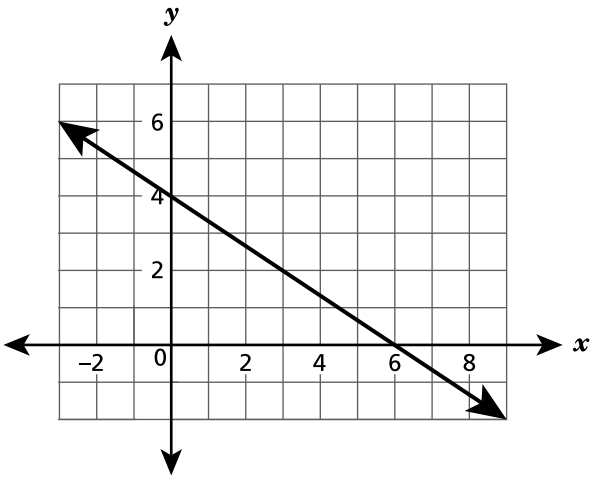
A $\angle A \cong \angle Y$

B $\angle B \cong \angle Y$

C $\angle B \cong \angle Z$

D $\angle C \cong \angle X$

26 A linear function is graphed on the coordinate plane shown below.



Which statement is true about the function?

A The rate of change is $\frac{2}{3}$ and the y intercept is 4.

B The rate of change is $\frac{2}{3}$ and the y intercept is 6.

C The rate of change is $-\frac{2}{3}$ and the y intercept is 4.

D The rate of change is $-\frac{2}{3}$ and the y intercept is 6.

27 Miguel is comparing the costs of renting a photobooth for an event. The costs of two companies are described below.

- The cost at Company A includes a $\$180.00$ set up fee plus an additional $\$49.00$ per hour.
- The cost at Company B is represented by the equation $c = 99h + 150$, where c is the cost, in dollars, for h hours.

Which statement correctly compares the costs for renting a photobooth?

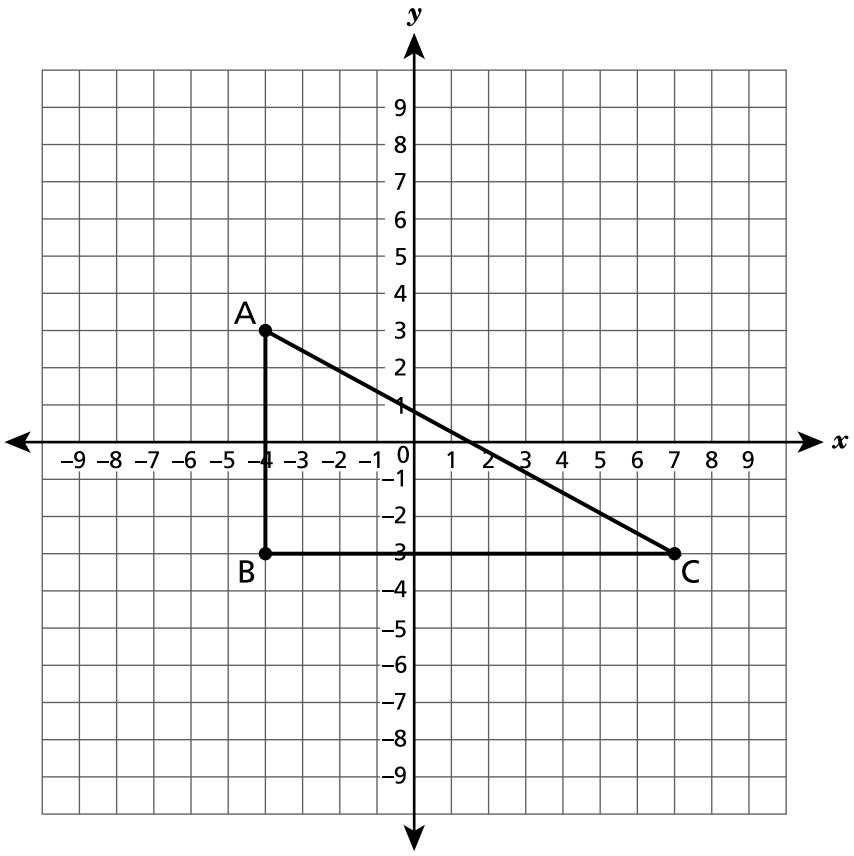
A Company A charges $\$30.00$ more per hour than Company B.

B Company B charges $\$50.00$ more per hour than Company A.

C Company A charges $\$50.00$ more per hour than Company B.

D Company B charges $\$30.00$ more per hour than Company A.

29 Triangle ABC is graphed on the coordinate plane shown below. Triangle ABC is translated 4 units left and 3 units up to create triangle $A'B'C'$.



What is the length, in units, of side $A'B'$?

A 2

B 6

C 7

D 9

30 A set of ordered pairs is shown below.

$\{(1,4),\ (2,5),\ (3,4),\ (k,6)\}$

Which value of k makes the set of ordered pairs a function?

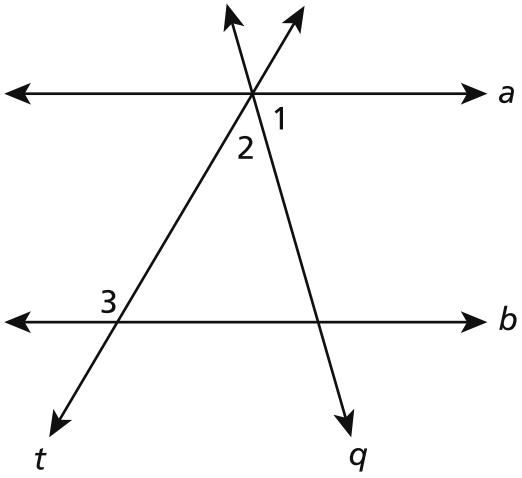
A 1

B 2

C 3

D 4

31 In the figure shown below, line a is parallel to line b, and lines q and t are transversals.



In the figure, the measure of angle 1 is $79°$ and the measure of angle 3 is $128°$. What is the measure, in degrees, of angle 2?

A 49

B 52

C 101

D 128

GO ON

32 An equation is shown below.

$$\frac{1}{2}(14 + 4x) = 5(x - 2) + 2$$

What value of x makes the equation true?

A $2\frac{1}{7}$

B 5

C $6\frac{1}{3}$

D 7

STOP

Grade 8
Mathematics Test
Session 1
Spring 2026

Name: _____

New York State Testing Program

Mathematics Test
Session 2

Grade 8

Spring 2026

RELEASED QUESTIONS

Session 2

TIPS FOR TAKING THE TEST

Here are some ideas to help you do your best:

- Read each question carefully. Take your time.
- You have a ruler, a protractor, a reference sheet, and a calculator that you can use on the test if they help you answer the question.
- Be sure to show your work when asked.
- Be sure to explain your answer when asked.

33 Which value of x makes the equation $x^3 = 8$ true?

A 2

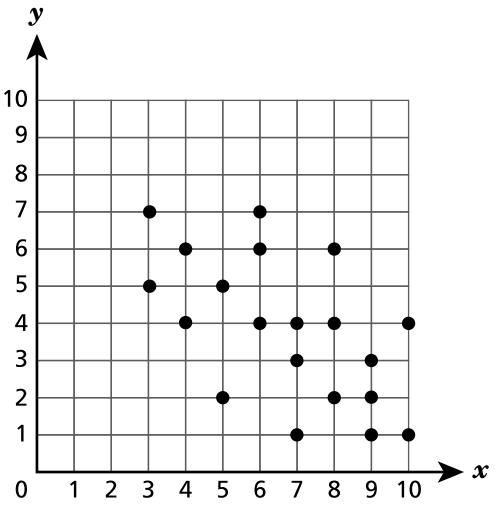
B 4

C 11

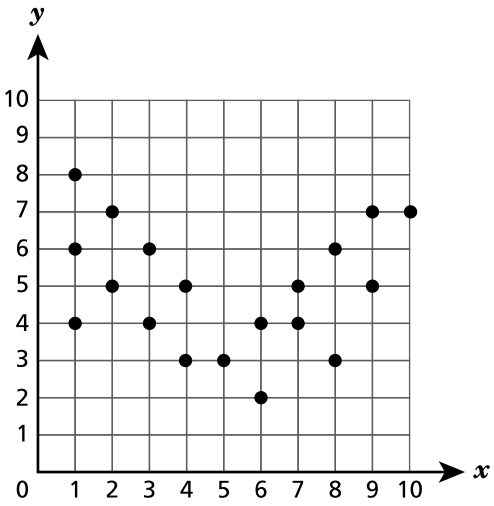
D 24

34 Which scatter plot represents data with a positive linear association?

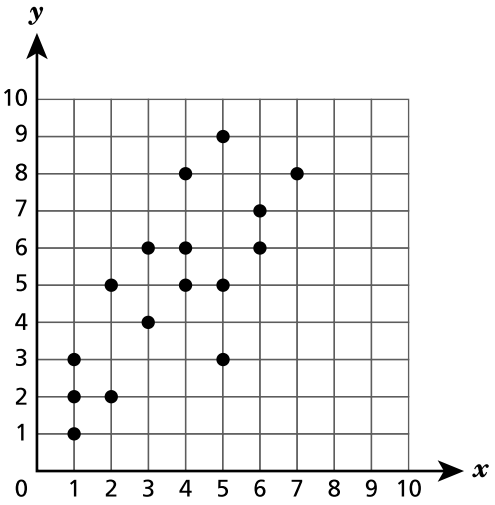
A



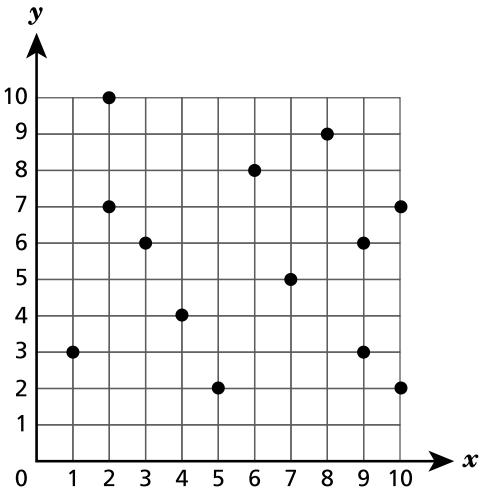
C



B

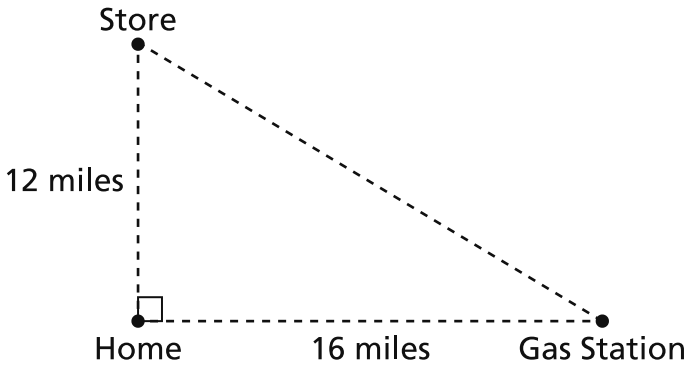


D



GO ON

35 The diagram below shows a map of a store, a home, and a gas station. Directly north of the home is a store that is 12 miles away. Directly east of the home is a gas station that is 16 miles away.



What is the distance, in miles, between the store and the gas station?

A 14

B 20

C 28

D 56

36 An equation is shown below.

$$2(4x + 5) = 5(2x + 1) - 2x$$

Which statement about the equation is true?

A The equation has no solution.

B The equation has one solution, $x = \frac{5}{2}$.

C The equation has one solution, $x = \frac{5}{4}$.

D The equation has an infinite number of solutions.

37 Which table of values represents y as a linear function of x ?

A

x	y
2	4
4	16
6	36
8	64

B

x	y
2	8
4	64
6	216
8	512

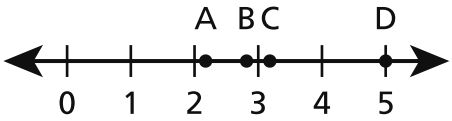
C

x	y
2	8
4	32
6	72
8	128

D

x	y
2	6
4	10
6	14
8	18

38 Points A, B, C, and D are plotted on the number line shown below.



Which point represents the **best** approximation of the value of $\sqrt{10}$?

A point A

B point B

C point C

D point D

GO ON

40 **This question is worth 1 credit.**

A cone has a height of 12 inches and a radius of 3.2 inches. What is the volume, in cubic inches, of the cone to the nearest tenth of a cubic inch?

Answer _____ cubic inches

GO ON

41 **This question is worth 1 credit.**

Triangle ABC is graphed on a coordinate plane. The coordinates of the vertices are listed below.

- $A\ (6, -4)$
- $B\ (-3, 8)$
- $C\ (-9, 3)$

Triangle ABC is dilated by a scale factor of $\frac{1}{3}$ with the center of dilation at the origin, resulting in Triangle $A'B'C'$. What are the coordinates of C' after the dilation?

Answer _____

43 **This question is worth 2 credits.**

A student wrote an incomplete comparison statement for two expressions as shown below.

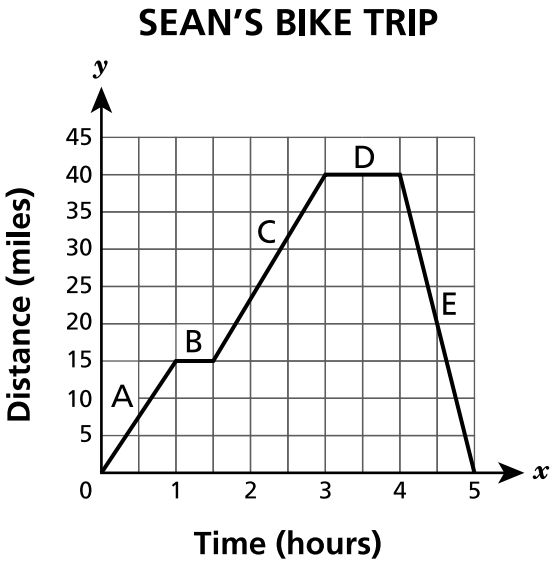
$$(16^5)^4 \bigcirc 16^8 \cdot 16^{12}$$

Use the properties of exponents to explain which symbol, $>$, $<$, or $=$, should be placed in the circle to make the comparison statement true.

Explain your answer.

44 **This question is worth 2 credits.**

Sean is riding his bike along a trail. His distance from the start of the trail is a function of time, as shown in the graph below.



Which segments of the graph show a period of time, if any, where Sean was resting and not riding his bike along the trail?

Explain your answer.

45 **This question is worth 2 credits.**

Jacqueline builds a box in the shape of a right rectangular prism with dimensions that measure 20.5 inches in length, 13.5 inches in width, and 10 inches in height. What is the volume, in cubic inches, of this box?

Show your work.

Answer _____ cubic inches

46 **This question is worth 2 credits.**

A coffee shop manager tracks the daily high temperature and the number of cups of coffee sold daily in October to predict sales in November. The manager uses this data to model the relationship between the number of cups of coffee sold daily in October, y, and the daily temperature, x, in degrees Fahrenheit with the equation $y = -2.3x + 187$. Based on the model, how many cups of coffee can the manager predict to be sold in one day in November if the high temperature for that day is $60°\text{F}$?

Show your work.

Answer _____ cups

GO ON

47 **This question is worth 2 credits.**

Jack buys a circular rug with a circumference of 5.5π feet. What is the area, to the nearest square foot, of the rug?

Show your work.

Answer _____ square feet

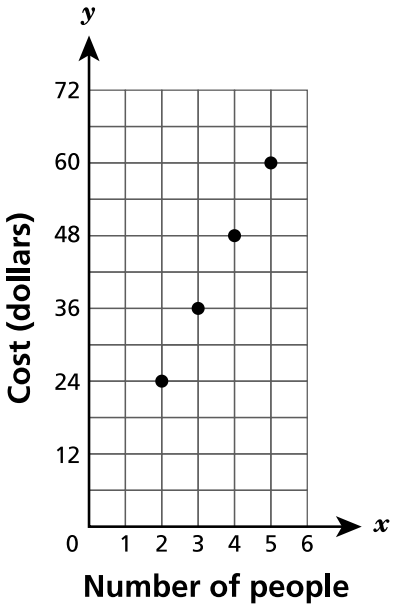
48 **This question is worth 3 credits.**

A group of friends is comparing the cost to go water tubing. The cost is proportional to the number of people in the group for two companies, Splash Zone and Tube Time, as shown in the table and the graph below.

SPLASH ZONE

Number of people, x	Cost, c
3	\$33.75
4	\$45.00
5	\$56.25
6	\$67.50

TUBE TIME



What is the difference in the cost, between the two companies, for 8 friends to go tubing? Be sure to include how the values in the table and in the graph were used in your answer.

Explain how you determined your answer.

STOP

Grade 8
Mathematics Test
Session 2
Spring 2026

THE STATE EDUCATION DEPARTMENT

THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234

2026 Mathematics Tests Map to the Standards

Grade 8

Question	Type	Key	Points	Standard	Cluster	Subscore	Secondary Standard(s)
Session 1							
1	Multiple Choice	D	1	NGLS.Math.Content.NY-8.G.3	Geometry	Geometry	
2	Multiple Choice	B	1	NGLS.Math.Content.NY-8.EE.5	Expressions and Equations	Expressions and Equations	
3	Multiple Choice	D	1	NGLS.Math.Content.NY-8.EE.1	Expressions and Equations	Expressions and Equations	
4	Multiple Choice	D	1	NGLS.Math.Content.NY-8.SP.3	Statistics and Probability	Statistics and Probability	
5	Multiple Choice	B	1	NGLS.Math.Content.NY-8.NS.1	Number Systems		NGLS.Math.Content.NY-8.EE.2
6	Multiple Choice	C	1	NGLS.Math.Content.NY-8.G.9	Geometry	Geometry	
7	Multiple Choice	D	1	NGLS.Math.Content.NY-8.G.6	Geometry	Geometry	
8	Multiple Choice	A	1	NGLS.Math.Content.NY-8.EE.6	Expressions and Equations	Expressions and Equations	
10	Multiple Choice	D	1	NGLS.Math.Content.NY-8.G.4	Geometry	Geometry	
11	Multiple Choice	D	1	NGLS.Math.Content.NY-8.F.1	Functions	Functions	
12	Multiple Choice	B	1	NGLS.Math.Content.NY-8.EE.7a	Expressions and Equations	Expressions and Equations	
13	Multiple Choice	C	1	NGLS.Math.Content.NY-7.G.2	Geometry	Geometry	
14	Multiple Choice	A	1	NGLS.Math.Content.NY-8.F.3	Functions	Functions	
15	Multiple Choice	A	1	NGLS.Math.Content.NY-8.EE.1	Expressions and Equations	Expressions and Equations	
17	Multiple Choice	D	1	NGLS.Math.Content.NY-8.G.4	Geometry	Geometry	NGLS.Math.Content.NY-8.G.5
18	Multiple Choice	C	1	NGLS.Math.Content.NY-8.F.5	Functions	Functions	
19	Multiple Choice	C	1	NGLS.Math.Content.NY-8.F.4	Functions	Functions	
20	Multiple Choice	B	1	NGLS.Math.Content.NY-8.EE.6	Expressions and Equations	Expressions and Equations	
21	Multiple Choice	A	1	NGLS.Math.Content.NY-8.EE.7b	Expressions and Equations	Expressions and Equations	
22	Multiple Choice	D	1	NGLS.Math.Content.NY-8.G.2	Geometry	Geometry	
23	Multiple Choice	C	1	NGLS.Math.Content.NY-7.G.5	Geometry	Geometry	
25	Multiple Choice	B	1	NGLS.Math.Content.NY-8.G.1b	Geometry	Geometry	
26	Multiple Choice	C	1	NGLS.Math.Content.NY-8.F.4	Functions	Functions	
27	Multiple Choice	B	1	NGLS.Math.Content.NY-8.F.2	Functions	Functions	
29	Multiple Choice	B	1	NGLS.Math.Content.NY-8.G.1a	Geometry	Geometry	
30	Multiple Choice	D	1	NGLS.Math.Content.NY-8.F.1	Functions	Functions	
31	Multiple Choice	A	1	NGLS.Math.Content.NY-8.G.5	Geometry	Geometry	
32	Multiple Choice	B	1	NGLS.Math.Content.NY-8.EE.7b	Expressions and Equations	Expressions and Equations	
Session 2							
33	Multiple Choice	A	1	NGLS.Math.Content.NY-8.EE.2	Expressions and Equations	Expressions and Equations	
34	Multiple Choice	B	1	NGLS.Math.Content.NY-8.SP.1	Statistics and Probability		
35	Multiple Choice	B	1	NGLS.Math.Content.NY-8.G.7	Geometry	Geometry	
36	Multiple Choice	A	1	NGLS.Math.Content.NY-8.EE.7a	Expressions and Equations	Expressions and Equations	
37	Multiple Choice	D	1	NGLS.Math.Content.NY-8.F.3	Functions	Functions	
38	Multiple Choice	C	1	NGLS.Math.Content.NY-8.NS.2	Number Systems		
40	Constructed Response		1	NGLS.Math.Content.NY-8.G.9	Geometry	Geometry	
41	Constructed Response		1	NGLS.Math.Content.NY-8.G.3	Geometry	Geometry	
43	Constructed Response		2	NGLS.Math.Content.NY-8.EE.1	Expressions and Equations	Expressions and Equations	
44	Constructed Response		2	NGLS.Math.Content.NY-8.F.5	Functions	Functions	
45	Constructed Response		2	NGLS.Math.Content.NY-7.G.6	Geometry	Geometry	
46	Constructed Response		2	NGLS.Math.Content.NY-8.SP.3	Statistics and Probability		
47	Constructed Response		2	NGLS.Math.Content.NY-7.G.4	Geometry	Geometry	
48	Constructed Response		3	NGLS.Math.Content.NY-8.EE.5	Expressions and Equations	Expressions and Equations	

*This item map is intended to identify the primary analytic skills necessary to successfully answer each question. However, some questions measure proficiencies described in multiple standards, including a balanced combination of procedural and conceptual understanding.