

Name: _____

Prepare for 7th Grade Math Summer Assignment (2026)

1. Evaluate the expression shown below and write your answer as a fraction or mixed number in simplest form.

$$\frac{3}{8} - \frac{11}{12}$$

2. Evaluate the expression shown below and write your answer as a fraction or mixed number in simplest form.

$$\frac{7}{19} + \frac{3}{19}$$

3. Evaluate the expression shown below and write your answer as a fraction or mixed number in simplest form.

$$\frac{4}{3} + \frac{4}{11}$$

4. Evaluate the expression shown below and write your answer as a fraction or mixed number in simplest form.

$$\frac{1}{10} + \frac{3}{80}$$

5. Evaluate the expression shown below and write your answer as a fraction or mixed number in simplest form.

$$\frac{7}{15} - \frac{8}{9}$$

6. Evaluate the expression shown below and write your answer as a fraction or mixed number in simplest form.

$$-\frac{11}{13} + \left(-\frac{12}{13}\right)$$

7. Evaluate the expression shown below and write your answer as a fraction or mixed number in simplest form.

$$\frac{3}{11} + \left(-\frac{8}{7}\right)$$

8. Evaluate the expression shown below and write your answer as a fraction or mixed number in simplest form.

$$-\frac{11}{7} + \frac{3}{10}$$

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9. Evaluate the expression shown below and write your answer as a fraction or mixed number in simplest form.

$$-\frac{7}{19} - \frac{1}{19}$$

10. Evaluate the expression shown below and write your answer as a fraction or mixed number in simplest form.

$$-\frac{3}{8} - \left(-\frac{1}{12}\right)$$

11. Perform the operation and reduce the answer fully.
Make sure to express your answer as a simplified fraction.

$$-\frac{3}{10} \cdot \frac{5}{3}$$

12. Perform the operation and reduce the answer fully.
Make sure to express your answer as a simplified fraction.

$$\frac{9}{10} \div \frac{7}{4}$$

13. Perform the operation and reduce the answer fully.
Make sure to express your answer as a simplified fraction.

$$-\frac{7}{10} \cdot -\frac{7}{10}$$

14. Perform the operation and reduce the answer fully.
Make sure to express your answer as a simplified fraction.

$$-\frac{3}{4} \div 5$$

15. Perform the operation and reduce the answer fully.
Make sure to express your answer as a simplified fraction.

$$\frac{8}{9} \div -\frac{3}{8}$$

16. Without dividing, determine if 90,903 is divisible by 6 and explain how you know.

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17. Without dividing, determine if 12,144 is divisible by 4 and explain how you know.

18. Without dividing, determine if 64,451 is divisible by 9 and explain how you know.

19. Without dividing, determine if 15,066 is divisible by 3 and explain how you know.

20. Without dividing, determine if 48,405 is divisible by 5 and explain how you know.

21. Simplify: $\frac{8}{56}$

22. Simplify: $\frac{77}{110}$

23. Simplify: $\frac{8}{88}$

24. Simplify: $\frac{22}{77}$

25. Simplify: $\frac{30}{56}$

26. Round 4.2579 to the nearest hundredth.

27. Round 5.6 to the nearest whole number.

28. Round 3.18 to the nearest tenth.

29. Round 6.9889 to the nearest hundredth.

30. Round 5.41 to the nearest whole number.

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31. What is 56% of 375?

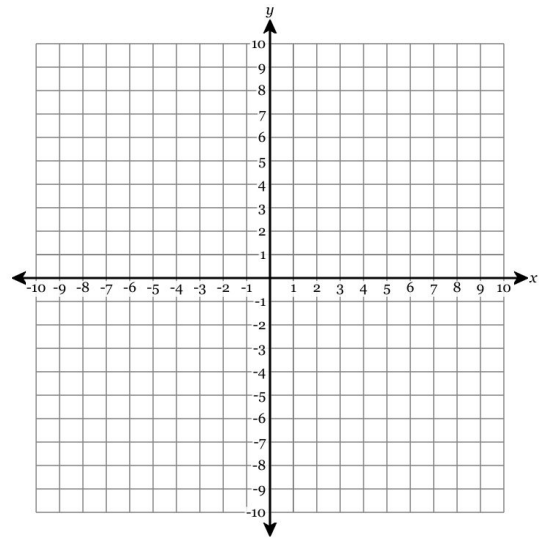
32. 46 is what percent of 200?

33. 203 is what percent of 725?

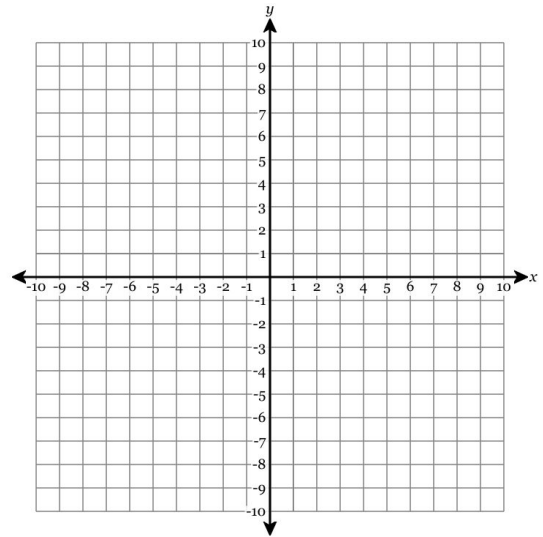
34. What is 52% of 500?

35. What is 96% of 25?

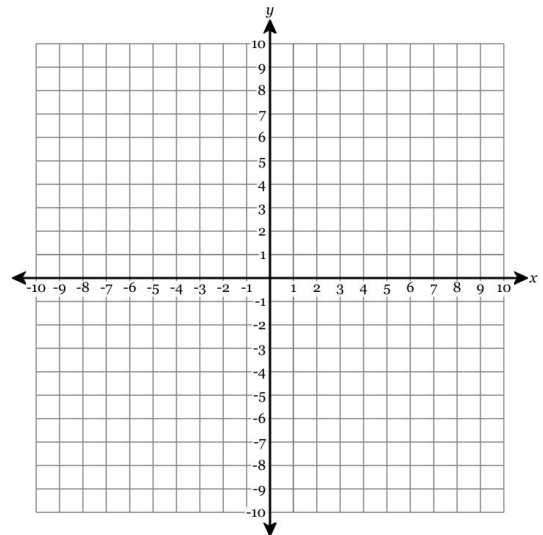
36. Plot the point $(6, 0)$.



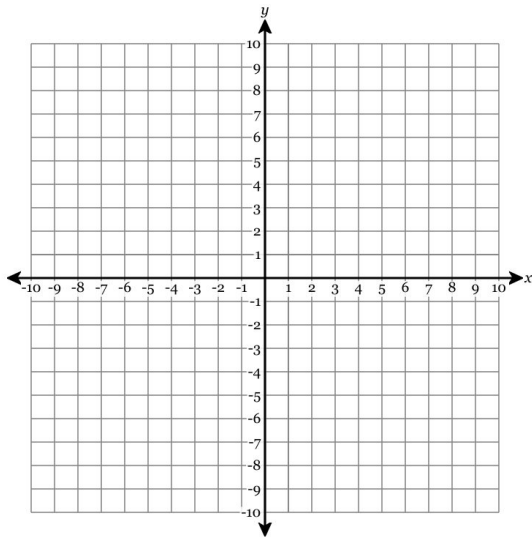
37. Plot the point $(5, 8)$.



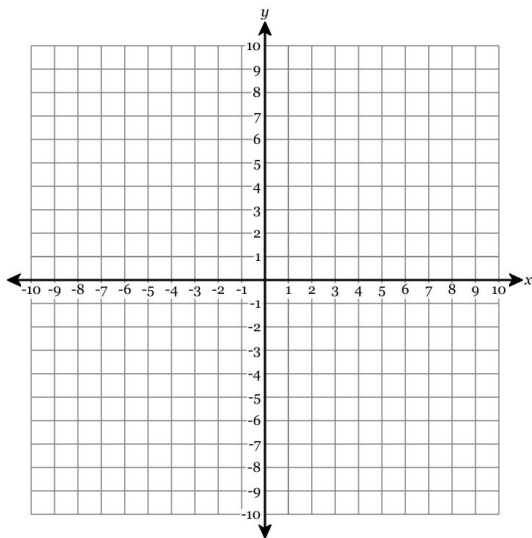
38. Plot the point $(-8, 2)$.



39. Plot the point
- $(-1, -5)$
- .



40. Plot the point
- $(0, -6)$
- .



41. Represent the following sentence as an algebraic expression, where “a number” is the letter
- x
- .

2 over a number.

42. Represent the following sentence as an algebraic expression, where “a number” is the letter
- x
- .

The sum of a number and 4.

43. Represent the following sentence as an algebraic expression, where “a number” is the letter
- x
- .

Five times a number.

44. Represent the following sentence as an algebraic expression, where “a number” is the letter
- x
- .

The difference of a number and 7.

45. Represent the following sentence as an algebraic expression, where “a number” is the letter
- x
- .

A number raised to the fifth power.

46. What is the value of the expression
- $4x - 3$
- when
- $x = 6$
- ?

47. What is the value of the expression
- $z^2 + 2z - 6$
- when
- $z = 9$
- ?

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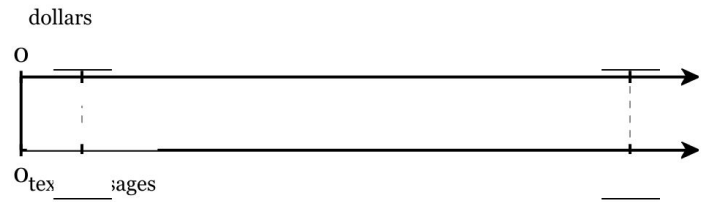
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48. What is the value of the expression $7y - 5z$ when $y = 8$ and $z = 5$?

49. What is the value of the expression $7x - 2$ when $x = 3$?

50. What is the value of the expression $3w + 7$ when $w = 3$?

51. It cost Kayla \$18.60 to send 124 text messages. What is the cost of sending text messages, in dollars per text? On the double number line below, fill in the given values, then use multiplication or division to find the missing value.



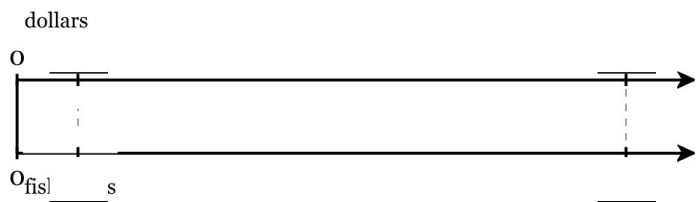
52. It cost Fatoumata \$2.10 to send 35 text messages. How much does it cost to send one text?

53. Aaron's car used 13 gallons to travel 390 miles. How many miles can the car go for each gallon of gas?

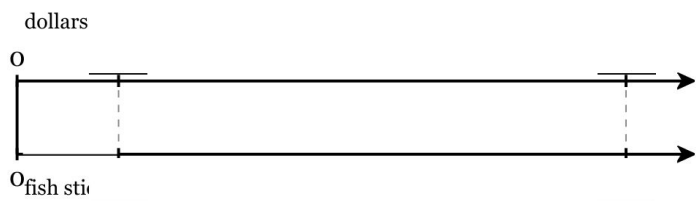
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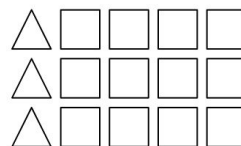
54. Jace bought 19 fish sticks for \$26.60. What's the unit cost of one fish stick? On the double number line below, fill in the given values, then use multiplication or division to find the missing value.



55. Micaela bought 6 fish sticks for \$9.00. What's the unit cost of one fish stick? On the double number line below, fill in the given values, then use multiplication or division to find the missing value.



56. Find the ratio of triangles to squares in the diagram below.

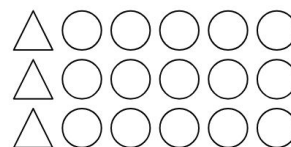


Ratio of triangles to squares (without simplifying):

:

For every 1 triangle there are _____ squares, therefore the simplified ratio of triangles to squares is _____ : _____.

57. Find the ratio of triangles to circles in the diagram below.

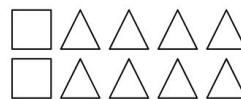


Ratio of triangles to circles (without simplifying):

:

For every 1 triangle there are _____ circles, therefore the simplified ratio of triangles to circles is _____ : _____.

58. Find the ratio of squares to triangles in the diagram below.



Ratio of squares to triangles (without simplifying):

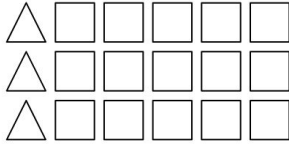
:

For every 1 square there are _____ triangles, therefore the simplified ratio of squares to triangles is _____ : _____.

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59. Find the ratio of triangles to squares in the diagram below.

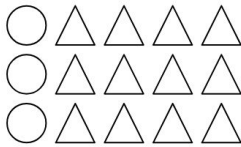


Ratio of triangles to squares (without simplifying):

:

For every 1 triangle there are _____ squares, therefore the simplified ratio of triangles to squares is _____ : _____.

60. Find the ratio of circles to triangles in the diagram below.

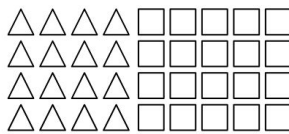


Ratio of circles to triangles (without simplifying):

:

For every 1 circle there are _____ triangles, therefore the simplified ratio of circles to triangles is _____ : _____.

61. Find the ratio of triangles to squares in the diagram below.

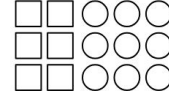


Ratio of triangles to squares (without simplifying):

:

For every 4 triangles there are _____ squares, therefore the simplified ratio of triangles to squares is _____ : _____.

62. Find the ratio of squares to total shapes in the diagram below.

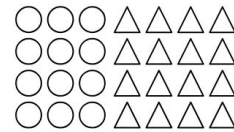


Ratio of squares to total shapes (without simplifying):

:

For every 2 squares there are _____ total shapes, therefore the simplified ratio of squares to total shapes is _____ : _____.

63. Find the ratio of circles to triangles in the diagram below.



Ratio of circles to triangles (without simplifying):

:

For every 3 circles there are _____ triangles, therefore the simplified ratio of circles to triangles is _____ : _____.

64. Find the ratio of triangles to squares in the diagram below.



Ratio of triangles to squares (without simplifying):

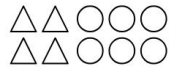
:

For every 3 triangles there are _____ squares, therefore the simplified ratio of triangles to squares is _____ : _____.

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65. Find the ratio of triangles to total shapes in the diagram below.



Ratio of triangles to total shapes (without simplifying):

:

For every **2** triangles there are _____ total shapes,
therefore the simplified ratio of triangles to total shapes
is _____ : _____.

66. Dianelys bought **13** fish sticks for **\$24.70**. If Dianelys spent **\$7.60**, how many fish sticks did she buy?

67. A grocery store sells a bag of **4** oranges for **\$2.64**. If Feng spent **\$3.30** on oranges, how many did he buy?

68. Bella drove **312** miles in **8** hours. If she continued at the same rate, how long would it take to travel **585** miles?

69. One week, Bentley earned **\$220.00** at his job when he worked for **10** hours. If he is paid the same hourly wage, how many hours would he have to work the next week to earn **\$638.00**?

70. Arun's car used **7** gallons to travel **126** miles. How far can he travel on **6** gallons?

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71. The table below shows Nakeisha's earnings on the job.

Time (hours)	Earnings (dollars)
14	\$309.40
18	\$397.80
22	\$486.20

What is the constant of proportionality between earnings and time in hours?

72. The table below shows that the number of miles driven by Valeria is directly proportional to the number of gallons she used.

Gallons Used	Miles Driven
25	1010
42	1696.8
44	1777.6

What is the constant of proportionality between the number of miles driven and the number of gallons used?

73. A company orders 12 boxed lunches from a deli for \$98.40. If each boxed lunch costs the same amount, what is the unit cost of each boxed lunch?

74. A 5-inch candle burns down in 10 hours. At what rate does the candle burn, in inches per hour?

75. Ariana buys 10 bottles of grapefruit juice at the corner store for a total cost of \$11.80. If each bottle costs the same amount, how much is each bottle of juice?

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76. The table below lists the masses and volumes of several pieces of the same type of metal. There is a proportional relationship between the mass and the volume of the pieces of metal.

Volume (cubic centimeters)	Mass (grams)
5.4	26.568
7.4	36.408
10.8	53.136

Determine the mass, in grams, of a piece of metal that has a volume of 8.8 cubic centimeters. Round your answer to the nearest tenth of a gram.

77. At the neighborhood grocery, 4 pounds of chicken thighs cost \$39.40. Hudson spent \$17.73 on chicken thighs. How many pounds of chicken thighs did he buy, to the nearest hundredth of a pound?

78. The table below shows that the number of miles driven by Abigail is directly proportional to the number of gallons she used.

Gallons Used	Miles Driven
43	1621.1
46	1734.2
50	1885

How many miles can she travel on 9.7 gallons of gas?

79. The table below shows Mohal's earnings on the job.

Time (hours)	Earnings (dollars)
11	\$304.70
17	\$470.90
25	\$692.50

How much does he make in 6.5 hours?

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80. A satellite flies 69464 miles in 9.14 hours. How long would it take to fly 174192 miles?

81. Find the value of x in the equation below.

$$\frac{x}{5} = 2$$

82. Find the value of x in the equation below.

$$5 + x = 13$$

83. Find the value of x in the equation below.

$$14 = x - 12$$

84. Find the value of x in the equation below.

$$7x = 28$$

85. Find the value of x in the equation below.

$$12 = 2x$$

86. Find the value of x in the equation below.

$$7x = 14$$

87. Find the value of x in the equation below.

$$4.9 = \frac{x}{9}$$

88. Find the value of x in the equation below.

$$4.5 = x - 6.7$$

89. Find the value of x in the equation below.

$$14.2 = x + 5.3$$

90. Find the value of x in the equation below.

$$8.8 = 8x$$

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91. Solve for a .

$$55 = -11a$$

92. Solve for a .

$$24 = 6a$$

93. Solve for r .

$$12 = 6r$$

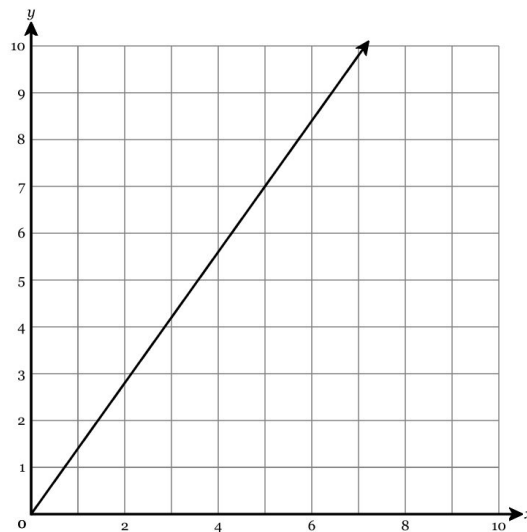
94. Solve for u .

$$55 = -11u$$

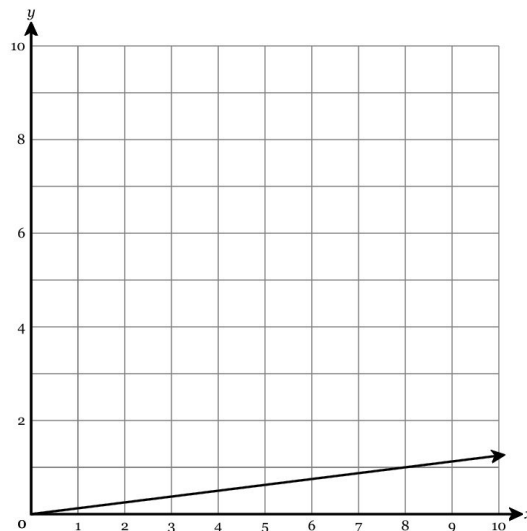
95. Solve for t .

$$-4t = 8$$

96. Find the equation that represents the proportional relationship in this graph, for y in terms of x .



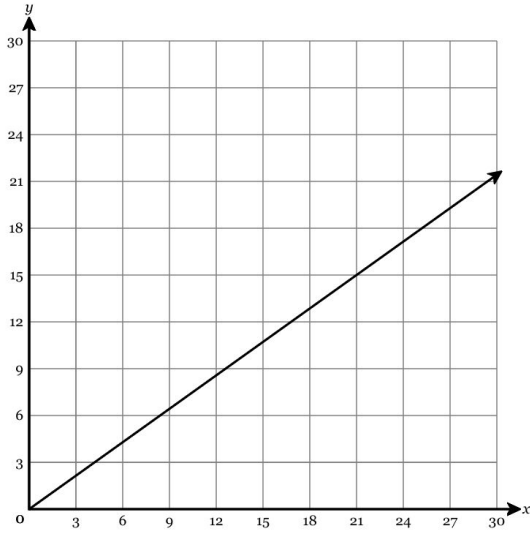
97. Find the equation that represents the proportional relationship in this graph, for y in terms of x .



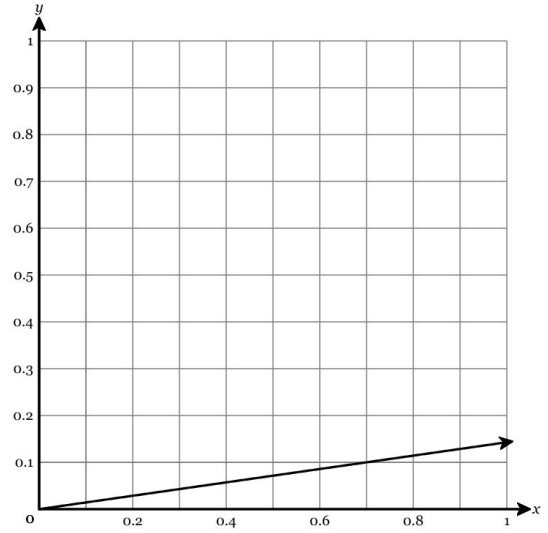
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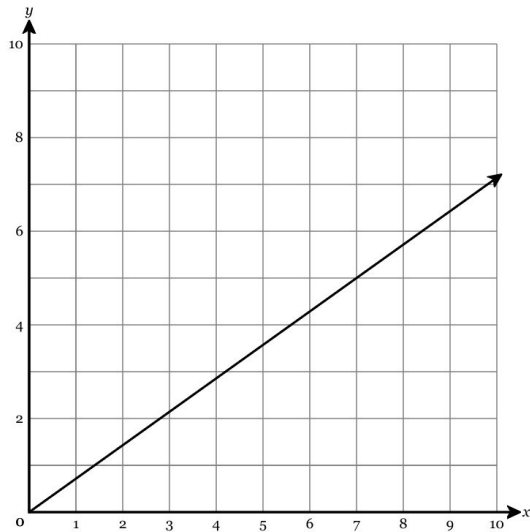
98. Find the equation that represents the proportional relationship in this graph, for y in terms of x .



100. Find the equation that represents the proportional relationship in this graph, for y in terms of x .



99. Find the equation that represents the proportional relationship in this graph, for y in terms of x .

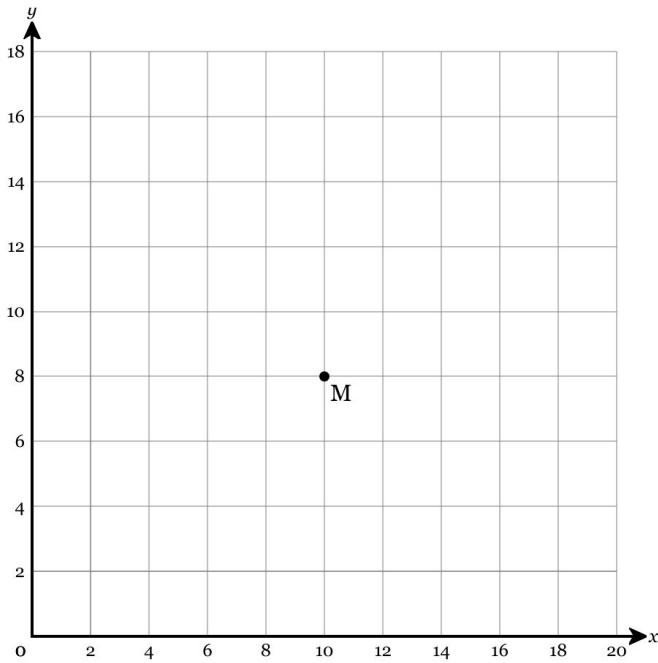


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101. Line ML represents a proportional relationship. Point M lies at $(10, 8)$ as shown on the graph below.

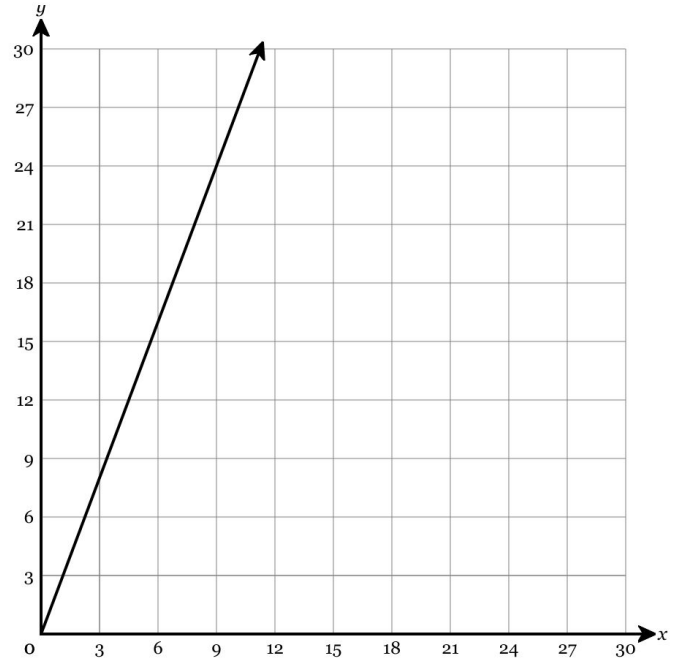
Which ordered pair could represent the coordinates of point L ?



- A. $(2, 2.5)$
- B. $(10, 12.5)$
- C. $(12.5, 10)$
- D. $(0.8, 0)$

102. A certain shade of purple paint is made by mixing blue and red paint. The relationship between the number of quarts of blue paint in the mix, x , and the number of quarts of red paint, y , is represented by the graph below.

What is the constant of proportionality as shown in the graph?



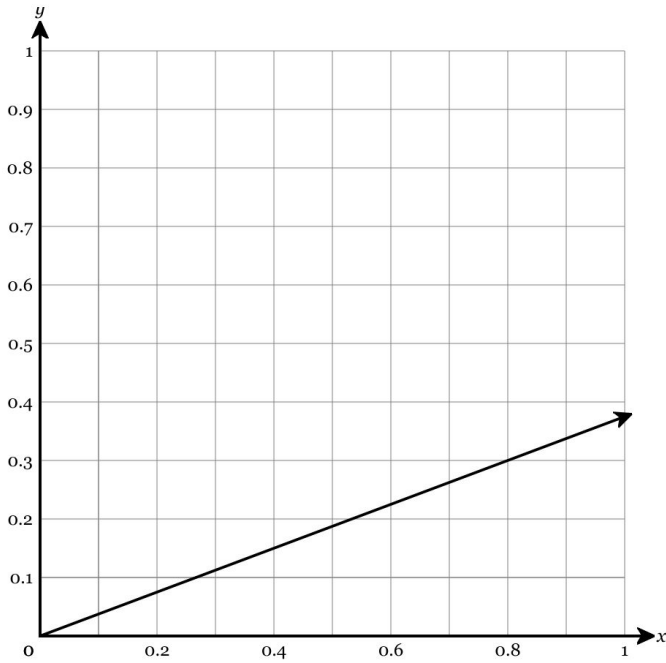
- A. $\frac{8}{3}$
- B. $\frac{8}{11}$
- C. $\frac{1}{3}$
- D. $\frac{3}{11}$

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103. An alloy is a combination of two or more metals. A certain alloy of metal is made up of silver and zinc. The relationship between the number of grams of silver in the alloy, x , and the number of grams of zinc in the alloy, y , is represented by the graph below.

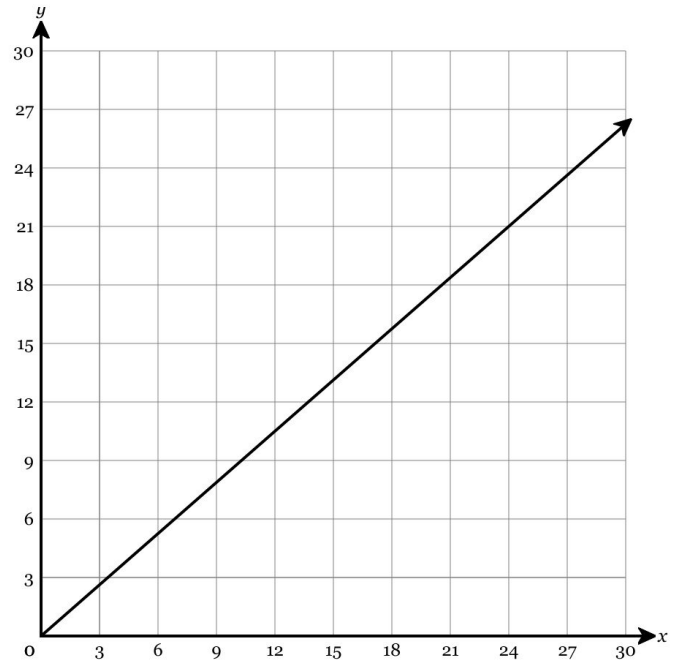
What is the constant of proportionality as shown in the graph?



- A. $\frac{1}{5}$ B. $\frac{3}{11}$ C. $\frac{3}{8}$ D. $\frac{8}{11}$

104. An alloy is a combination of two or more metals. A certain alloy of metal is made up of copper and nickel. The relationship between the number of grams of copper in the alloy, x , and the number of grams of nickel in the alloy, y , is represented by the graph below.

What is the constant of proportionality as shown in the graph?



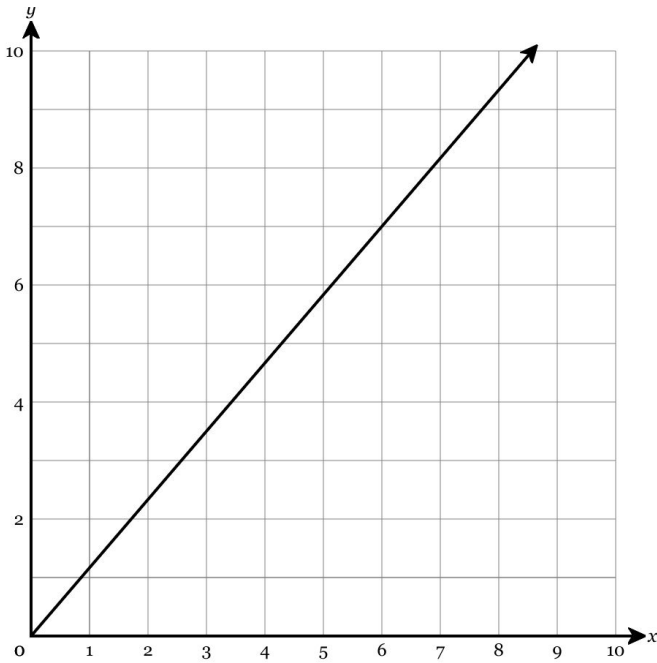
- A. $\frac{8}{15}$ B. $\frac{7}{15}$ C. $\frac{1}{2}$ D. $\frac{7}{8}$

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105. Annabelle is making lemonade from concentrate. The relationship between the number of quarts of concentrate, x , and the number of quarts of water, y , is represented by the graph below.

What is the constant of proportionality as shown in the graph?



- A. $\frac{1}{5}$ B. $\frac{7}{6}$ C. $\frac{6}{13}$ D. $\frac{7}{13}$

106. The proportional relationship between the number of songs Piper downloads, s , and the total cost in dollars and cents, c , can be represented by the equation $c = 1.04s$. How much does it cost to download a single song?

107. A 9-inch candle burns down in 6 hours. If b represents how much of the candle, in inches, has burned away at any time given in hours, t , write a proportional equation for b in terms of t that matches the context.

108. The table below shows that the number of miles driven by Lillian is directly proportional to the number of gallons she used.

Gallons Used	Miles Driven
29	539.4
47	874.2
50	930

If m represents the number of miles driven for any number of gallons used, g , write a proportional equation for m in terms of g that matches the context.

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109. The proportional relationship between two variables, b and c , is represented by $b = \frac{1}{7}c$. What is the constant of proportionality from c to b ?

110. Malik buys bottles of apple juice at the corner store. Assume each bottle of juice is the same price. The proportional relationship between the number of juice bottles bought, j , and the total cost in dollars and cents, c , can be represented by the equation $c = 1.16j$. What is the cost in dollars and cents of each bottle of juice?

111. Use the distributive property to write an equivalent expression.

$$5(6x + 3y - 6)$$

112. Use the distributive property to write an equivalent expression.

$$9(6m - 9n + 9)$$

113. Use the distributive property to write an equivalent expression.

$$5(7t + 2)$$

114. Use the distributive property to write an equivalent expression.

$$7(7m + 5n)$$

115. Use the distributive property to write an equivalent expression.

$$2(9t + 5v - 3)$$

116. Use multiplication to expand the expression below. Then compute.

$$4^3$$

117. Use an exponent to condense the expression below. Then compute.

$$9 \times 9$$

118. Use an exponent to condense the expression below. Then compute.

$$5 \times 5 \times 5 \times 5 \times 5 \times 5$$

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119. Use multiplication to expand the expression below.
Then compute.

$$10^6$$

120. Use an exponent to condense the expression below.
Then compute.

$$3 \times 3 \times 3 \times 3$$

121. The stock market gained and lost value over the first four days of the week.

STOCK MARKET VALUE

Day	Change
Monday	+113.46
Tuesday	+68.74
Wednesday	-114.88
Thursday	-97.41

If the stock market gained value on Friday, which value could represent this change?

- A. 0
- B. - 83.32
- C. + 44.53
- D. - 51.68

122. The list below shows the temperature Joseph recorded at 11:00 p.m. for four days last January.

Monday: -13°F

Tuesday: -7°F

Wednesday: -27°F

Thursday: 15°F

On which of the days did Joseph record the lowest (coldest) temperature?

- A. Monday
- B. Tuesday
- C. Wednesday
- D. Thursday

123. The table below shows the elevation at which different artifacts were found in an archeological dig.

Artifact	Elevation
arrow head	897 feet
bone	455 feet
necklace	-1175 feet
clay bowl	0 feet
woven blanket	-476 feet

Which of these artifacts was discovered at sea level?

- A. clay bowl
- B. bone
- C. arrow head
- D. woven blanket

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124. The stock market gained and lost value over the first four days of the week.

STOCK MARKET VALUE

Day	Change
Monday	+3.26
Tuesday	-67.14
Wednesday	+9.92
Thursday	-37.71

If the stock market lost value on Friday, which value could represent this change?

- A. - 39.87
- B. + 52.47
- C. + 17.32
- D. 0

125. The list below shows the temperature Bo recorded at 11:00 p.m. for four days last January.

Monday: 0°F

Tuesday: -26°F

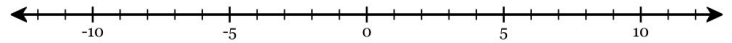
Wednesday: -4°F

Thursday: -16°F

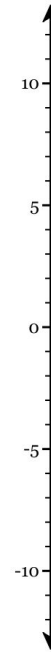
On which of the days did Bo record the highest (warmest) temperature?

- A. Monday
- B. Tuesday
- C. Wednesday
- D. Thursday

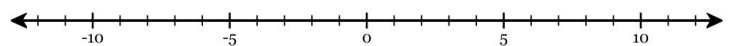
126. Point K is located at -9 . Plot Point K on the number line below.



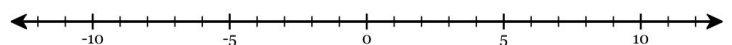
127. Point T is located at -9 . Plot Point T on the number line below.



128. Point Z is located at 3 . Plot Point Z on the number line below.



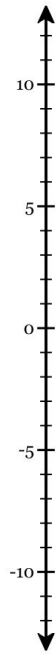
129. Point L is located at 12 . Plot Point L on the number line below.



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130. Point D is located at 11. Plot Point D on the number line below.



131. Write the numbers below in order from least to greatest. Use commas to separate.

132. Write the numbers below in order from least to greatest. Use commas to separate.

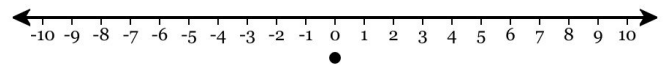
133. Write the numbers below in order from least to greatest. Use commas to separate.

134. Write the numbers below in order from least to greatest. Use commas to separate.

135. Write the numbers below in order from least to greatest. Use commas to separate.

136. Find the result graphically. Start from 0 and draw a series of jumps in a positive or negative direction to find the final answer.

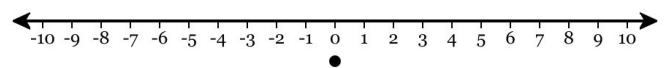
$$-7 + (-2)$$



$$-7 + (-2) = \underline{\hspace{2cm}}$$

137. Find the result graphically. Start from 0 and draw a series of jumps in a positive or negative direction to find the final answer.

$$-2 + 3$$



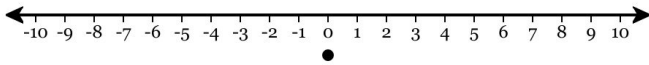
$$-2 + 3 = \underline{\hspace{2cm}}$$

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138. Find the result graphically. Start from 0 and draw a series of jumps in a positive or negative direction to find the final answer.

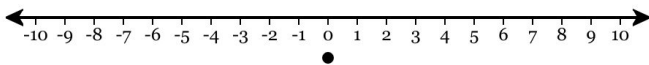
$$6 + (-3)$$



$$6 + (-3) = \underline{\hspace{2cm}}$$

139. Find the result graphically. Start from 0 and draw a series of jumps in a positive or negative direction to find the final answer.

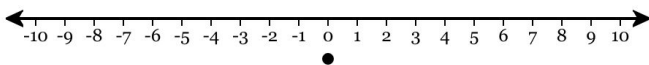
$$6 + 2$$



$$6 + 2 = \underline{\hspace{2cm}}$$

140. Find the result graphically. Start from 0 and draw a series of jumps in a positive or negative direction to find the final answer.

$$2 + 4$$



$$2 + 4 = \underline{\hspace{2cm}}$$

141. Use addition to rewrite the subtraction expression below *without changing the digits*. Do not solve.

$$-17 - 5$$

142. Use addition to rewrite the subtraction expression below *without changing the digits*. Do not solve.

$$-6 - (-12)$$

143. Use addition to rewrite the subtraction expression below *without changing the digits*. Do not solve.

$$9 - (-12)$$

144. Use addition to rewrite the subtraction expression below *without changing the digits*. Do not solve.

$$19 - 14$$

145. Use addition to rewrite the subtraction expression below *without changing the digits*. Do not solve.

$$4 - 18$$

146. Compute:

$$5 - (-6)$$

147. Compute:

$$(-6) - 7$$

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148. Compute:

$$8 + 4$$

149. Compute:

$$1 - 8$$

150. Compute:

$$-9 + 8$$

151. Simplify the expression below using order of operations.

$$\frac{4^2}{(7 + 1^1)} + 1$$

152. Simplify the expression below using order of operations.

$$9 \times 6 - (2^2 + 3)$$

153. Simplify the expression below using order of operations.

$$8^2 + 8 - 7 \times 7$$

154. Simplify the expression below using order of operations.

$$3^3 \div 1^1 + 1 - 8$$

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155. Simplify the expression below using order of operations.

$$3^3 + 8 - 2^1 \times 10$$



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