Name: _____ **Prepare for 8th Grade Math Summer Assignment (2026)**

1. Round 0.575 to the nearest hundredth.

2. Round 8.11 to the nearest tenth.

3. Round 7.28 to the nearest whole number.

4. Round 7.5143 to the nearest hundredth.

5. Round 5.6 to the nearest whole number.

6. Simplify: $\frac{12}{16}$

7. Simplify: $\frac{4}{18}$

8. Simplify: $\frac{4}{8}$

9. Simplify: $\frac{36}{70}$

10. Simplify: $\frac{12}{18}$

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

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

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

$$\frac{1}{2} + \frac{1}{14}$$

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

$$\frac{1}{12} - \frac{9}{20}$$

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

$$\frac{10}{11} - \frac{2}{11}$$

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

$$\frac{1}{12} + \frac{3}{16}$$

16. Perform the operation and simplify the answer fully.

$$\frac{9}{5} \div \frac{10}{9}$$

17. Perform the operation and simplify the answer fully.

$$\frac{5}{9} \cdot \frac{2}{7}$$

18. Perform the operation and simplify the answer fully.

$$\frac{1}{2} \cdot \frac{2}{3}$$

19. Perform the operation and simplify the answer fully.

$$\frac{\frac{7}{10}}{\frac{7}{10}}$$

20. Perform the operation and simplify the answer fully.

$$\frac{2}{3} \cdot \frac{5}{2}$$

21. Convert $\frac{85}{9}$ into a mixed number.

22. Convert $3\frac{1}{9}$ into an improper fraction.

23. Convert $2\frac{1}{3}$ into an improper fraction.

24. Convert $\frac{18}{5}$ into a mixed number.

25. Convert $6\frac{7}{8}$ into an improper fraction.

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

$$-3\frac{9}{10} \div \frac{7}{9}$$

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

$$\frac{8}{9} \cdot \frac{3}{4}$$

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

$$3\frac{7}{8} \times -1\frac{9}{10}$$

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

$$5\frac{9}{10} \times \frac{7}{10}$$

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

$$\frac{2}{9} \div -\frac{9}{2}$$

31. Convert $\frac{5}{8}$ into a decimal.

32. Convert $\frac{1}{60}$ into a decimal.

33. Convert $\frac{23}{40}$ into a decimal.

34. Convert $\frac{1}{40}$ into a decimal.

35. Convert $\frac{31}{50}$ into a decimal.

36. Convert 0.815 to a fraction in simplest form.

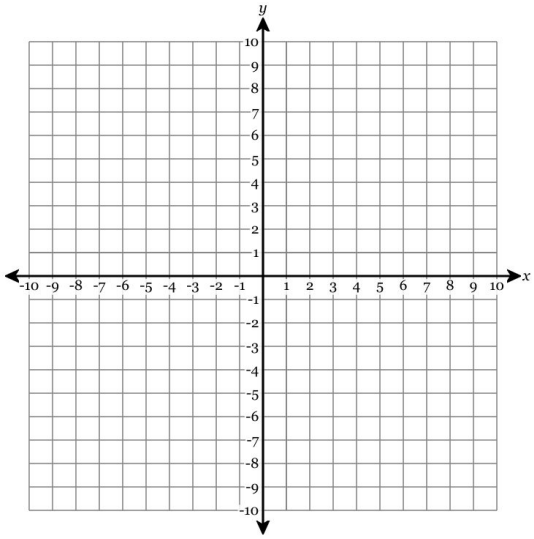
37. Convert 0.622 to a fraction in simplest form.

38. Convert 0.88 to a fraction in simplest form.

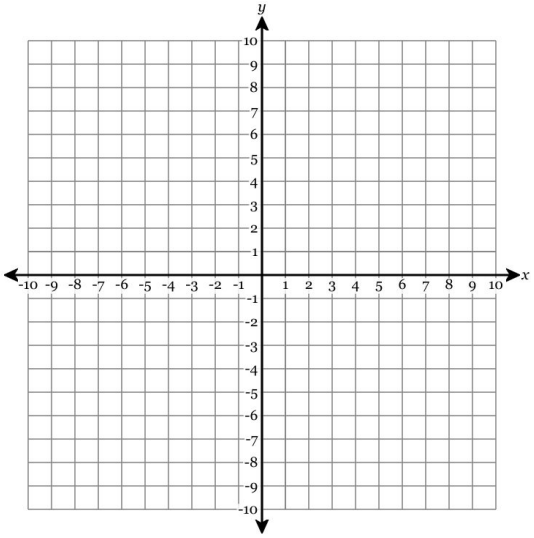
39. Convert 0.787 to a fraction in simplest form.

40. Convert 0.567 to a fraction in simplest form.

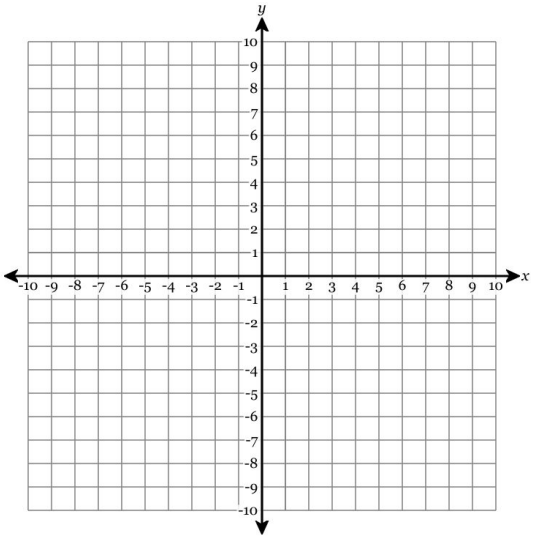
41. Plot the point $(5, -2)$.



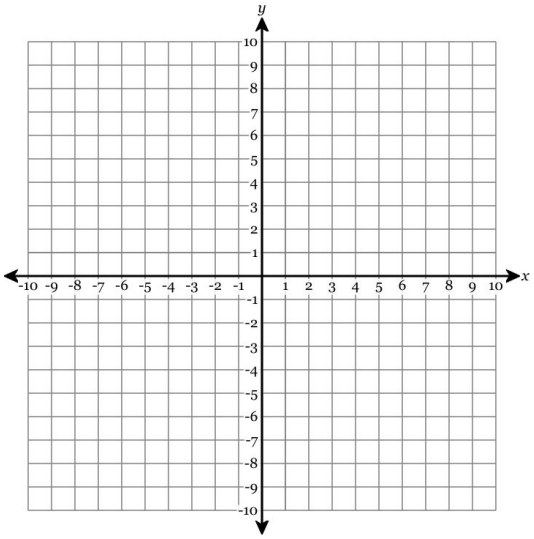
42. Plot the point $(-3, 0)$.



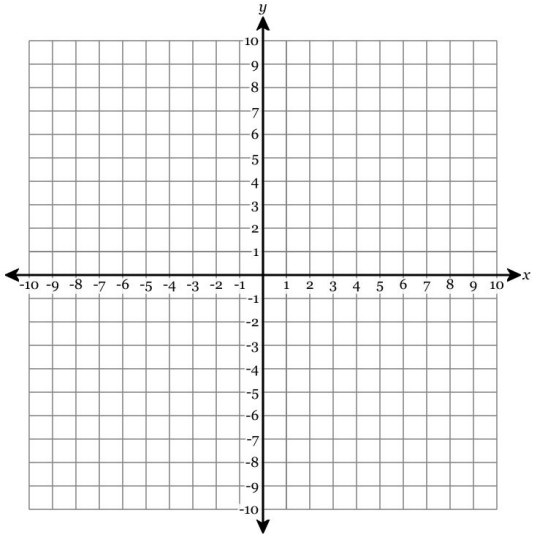
43. Plot the point $(4, 0)$.



44. Plot the point $(-5, -7)$.



45. Plot the point $(-3, -2)$.



46. Select the point which lies in the first quadrant.

A. $(4, -5)$

B. $(-8, 2)$

C. $(-5, -6)$

D. $(3, 4)$

47. In which quadrant does the point $(7, -5)$ lie?

A. Quadrant 1

B. Quadrant 2

C. Quadrant 3

D. Quadrant 4

48. In which quadrant does the point $(3, -1)$ lie?

A. Quadrant 1

B. Quadrant 2

C. Quadrant 3

D. Quadrant 4

49. In which quadrant does the point $(5, -1)$ lie?

A. Quadrant I

B. Quadrant II

C. Quadrant III

D. Quadrant IV

50. In which quadrant does the point $(4, -5)$ lie?

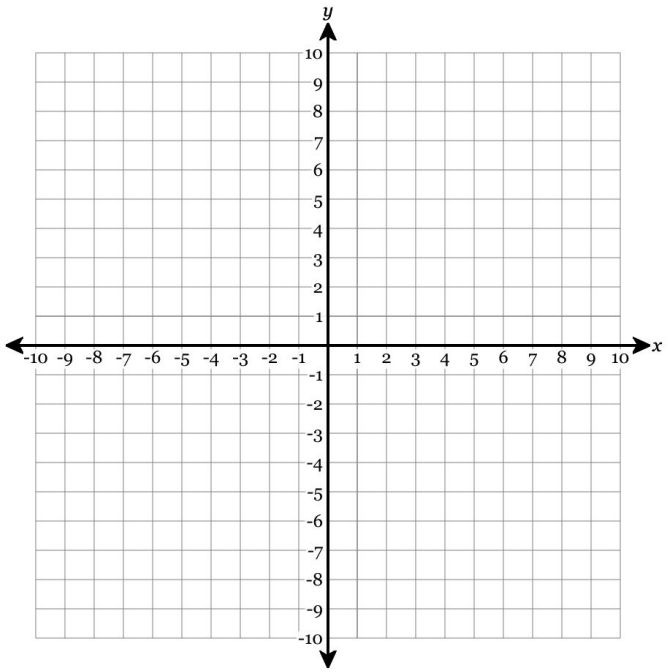
A. Quadrant I

B. Quadrant II

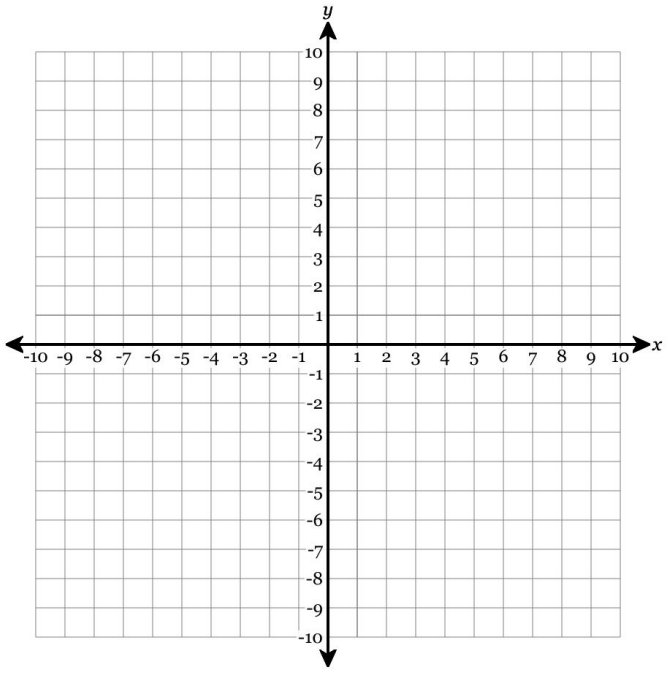
C. Quadrant III

D. Quadrant IV

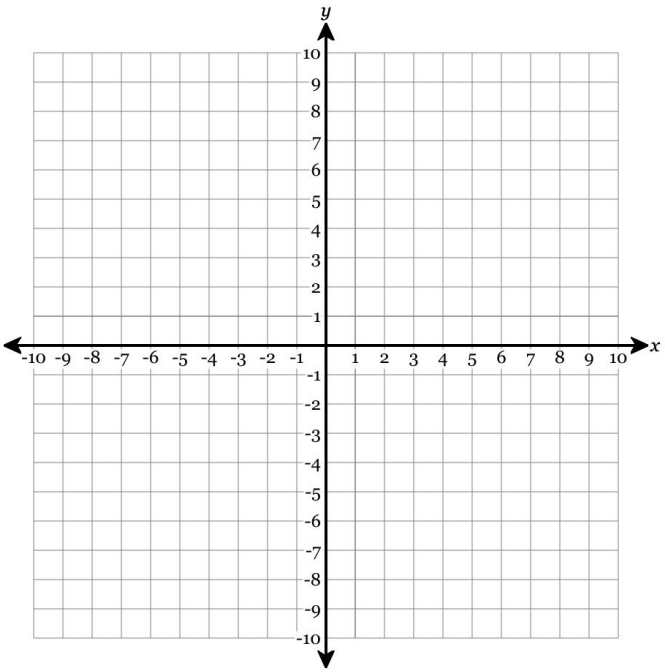
51. Plot the point $(1, 4)$ and identify the quadrant.



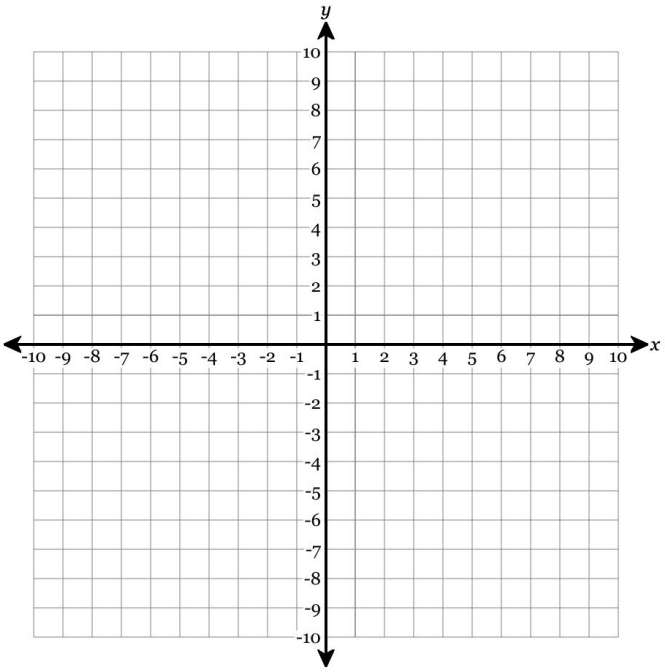
52. Plot the point $(-6, -1)$ and identify the quadrant.



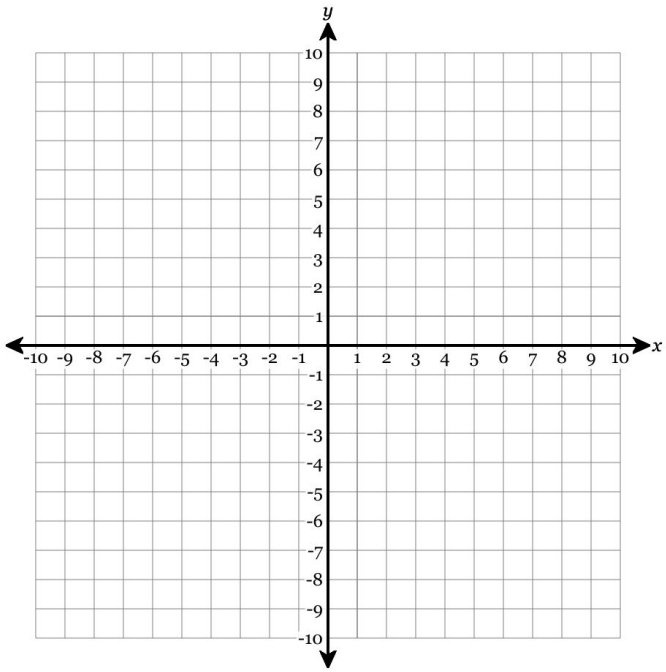
53. Plot the point $(-2, 8)$ and identify the quadrant.



54. Plot the point $(4, -4)$ and identify the quadrant.

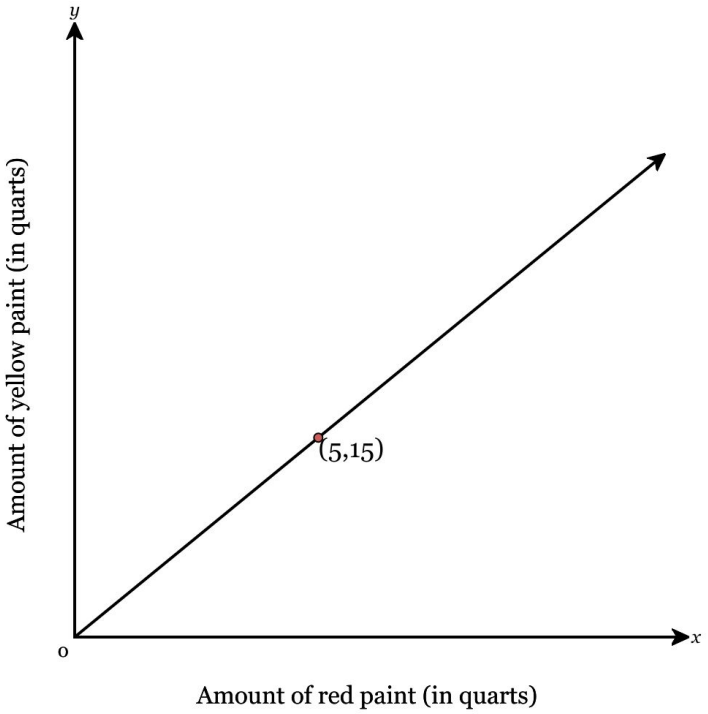


55. Plot the point $(-1, 4)$ and identify the quadrant.



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

What is the ratio of yellow paint to red paint?



A. $2:1$

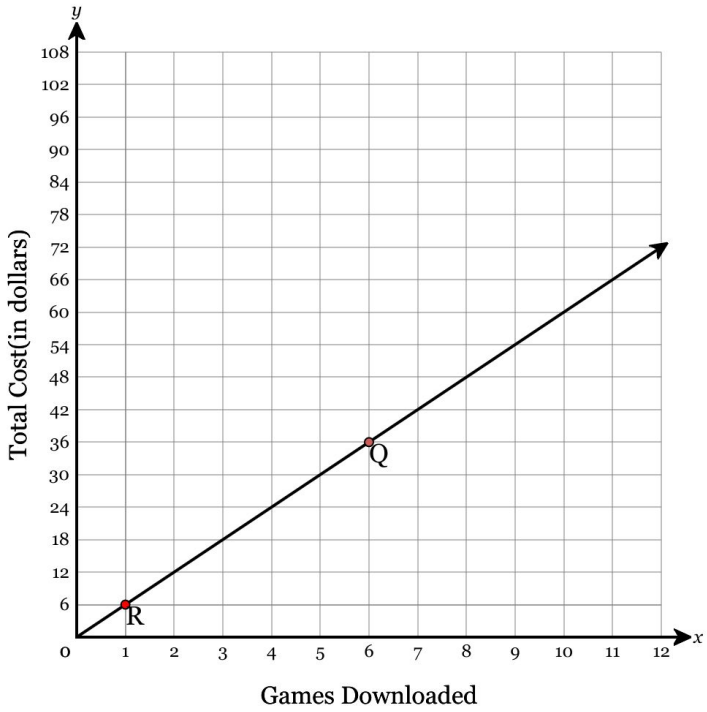
B. $1:4$

C. $1:3$

D. $3:1$

57. Grayson buys mobile games via an app store on his phone. The relationship between the number of games downloaded, x, and the total cost in dollars of the downloads, y, is represented by the graph below.

Two points, Q and R, are labeled. Which statement about the graph is true?



A. Point R means that the unit rate is \$6.00 per game

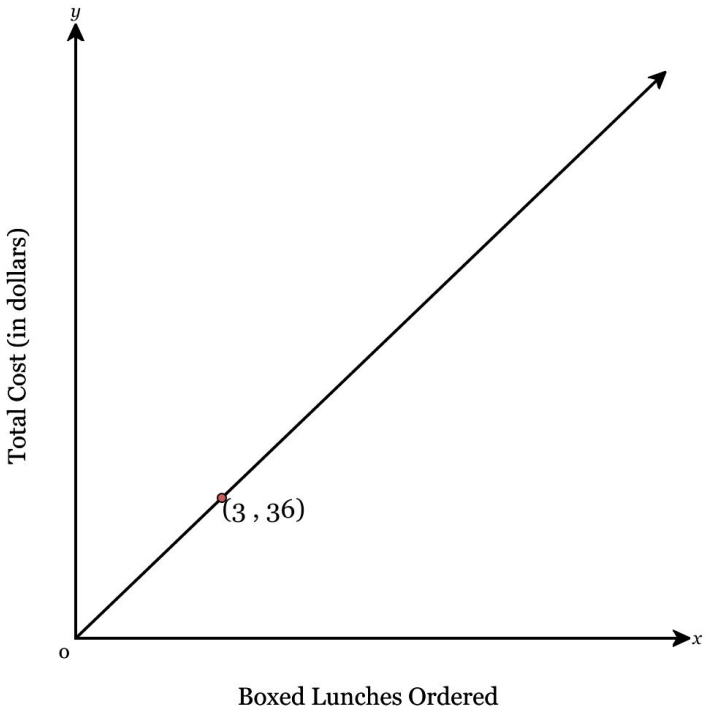
B. Point R means that the unit rate is 6 games per dollar

C. Point Q means that the unit rate is 6 games per dollar

D. Point Q means that the unit rate is \$36.00 per game

58. A company orders boxed lunches from a deli, which all cost the same price. The relationship between the number of boxed lunches ordered, x, and the total cost in dollars of the lunches, y, is represented by the graph below.

A point $(3, 36)$ is labeled below. Which statement about the graph is true?



A. The unit rate is \$12.00 per lunch

B. The unit rate is 12 lunches per dollar

C. The unit rate is \$36.00 per lunch

D. The unit rate is 3 lunches per dollar

59. A grocery store sells sliced roast beef by weight. The relationship between the amount of roast beef in pounds, x, and the total cost in dollars of the sliced roast beef, y, is represented by a graph drawn in the xy-plane.

If the point $(10, 50)$ lies on the graph, what does the ordered pair $(10, 50)$ indicate?

A. 10 pounds of roast beef cost \$50.00 each

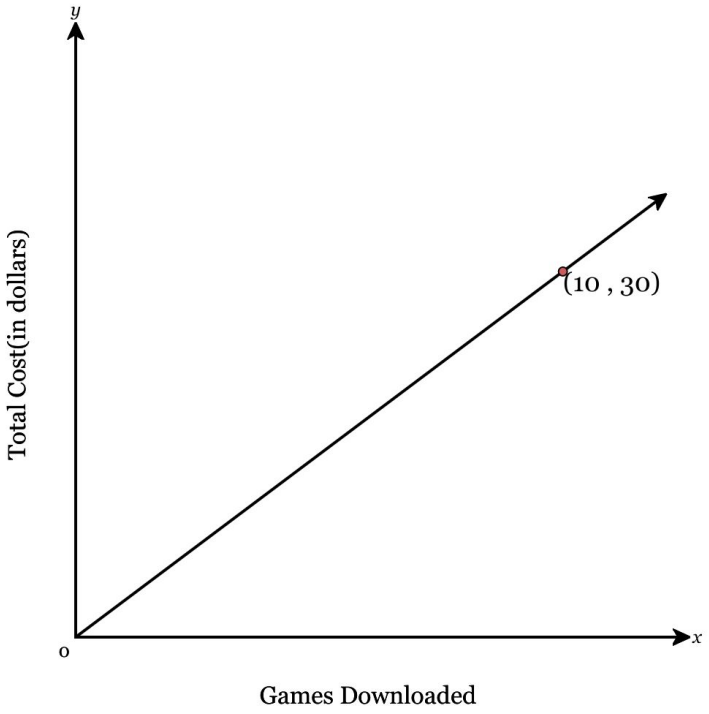
B. 50 pounds of roast beef cost a total of \$10.00

C. 50 pounds of roast beef cost \$10.00 each

D. 10 pounds of roast beef cost a total of \$50.00

60. Juan buys mobile games via an app store on his phone. The relationship between the number of games downloaded, x, and the total cost in dollars of the downloads, y, is represented by the graph below.

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



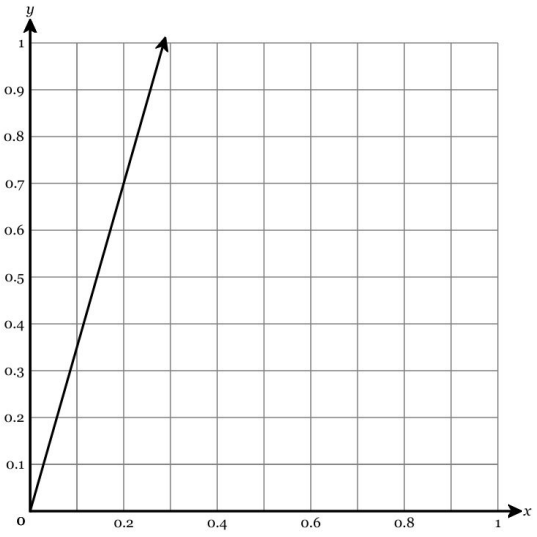
A. 30

B. 3

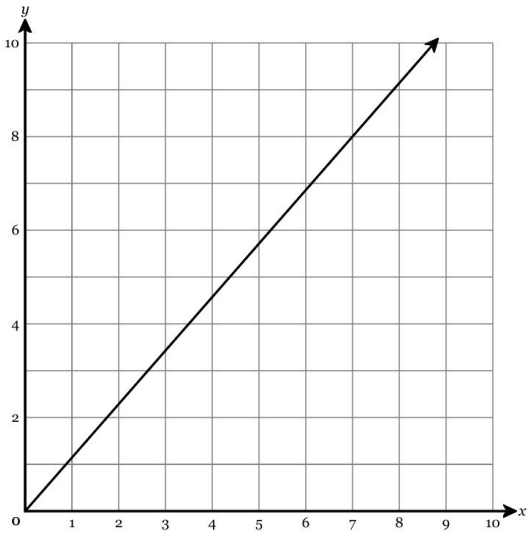
C. 10

D. 20

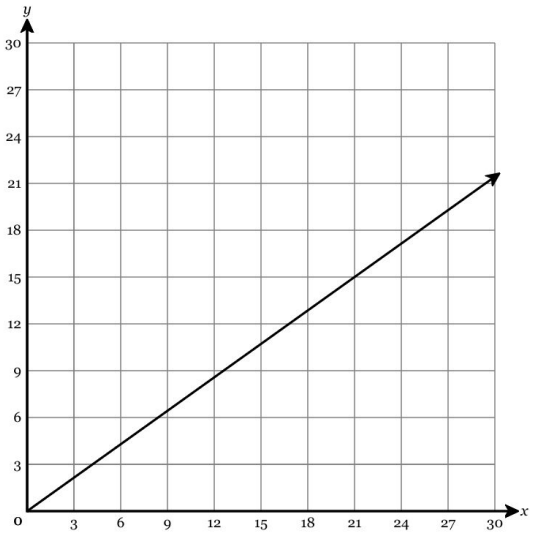
61. Find the equation that represents the proportional relationship in this graph, for y in terms of x.



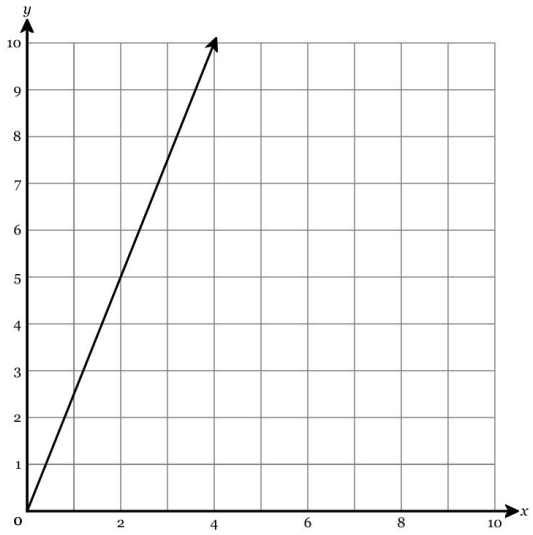
62. Find the equation that represents the proportional relationship in this graph, for y in terms of x.



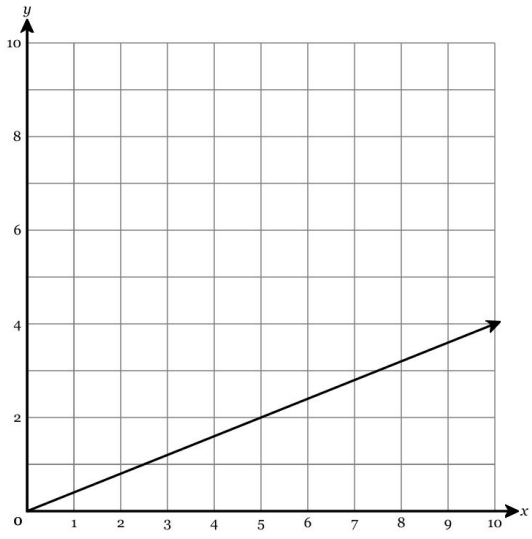
63. Find the equation that represents the proportional relationship in this graph, for y in terms of x.



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



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



66. The table below shows a proportional relationship between y and z.

y	z
35	5
119	17
140	20

Find the constant of proportionality from y to z. Express your answer as a fraction in reduced terms.

67. A four-sided figure is resized to create a scaled copy. The lengths of its four sides change as in the table below.

Original Figure	Scaled Copy
55	5
77	7
132	12

Find the scale factor as a fraction in reduced terms.

68. The table below shows Mackenzie's earnings on the job.

Time (hours)	Earnings (dollars)
15	$262.50
23	$402.50
26	$455

What is Mackenzie's rate of pay, in dollars per hour?

69. The table below shows that the number of miles driven by Jacob is directly proportional to the number of gallons he used.

Gallons Used	Miles Driven
43	1208.3
48	1348.8
50	1405

What is the rate of gas usage, in miles per gallon?

70. A company orders 15 boxed lunches from a deli for $128.25. If each boxed lunch costs the same amount, what is the unit cost of each boxed lunch?

71. A company orders boxed lunches from a deli. Assume each boxed lunch is the same price. The proportional relationship between the number of boxed lunches ordered, *b*, and the total cost in dollars and cents, *c*, can be represented by the equation $c = 11.25b$. What is the cost in dollars and cents per boxed lunch?

72. The table below shows Tanisha's earnings on the job.

Time (hours)	Earnings (dollars)
7	$127.40
15	$273
33	$600.60

If *e* represents her total earnings in dollars and cents for any number of hours worked, *h*, write a proportional equation for *e* in terms of *h* that matches the context.

73. A four-sided figure is resized to create a scaled copy. The lengths of its four sides change as in the table below.

Original Figure	Scaled Copy
3	9
5	15
8	24

If *s* represents the length of any side in the scaled copy corresponding to any given side in the original figure, *f*, write a proportional equation for *s* in terms of *f* that matches the context. Use a whole number or **fraction**, not a decimal, in your equation.

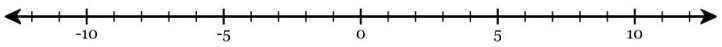
74. The table below shows a proportional relationship between t and u.

t	u
20	5
48	12
60	15

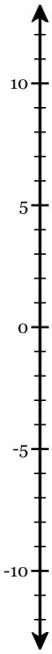
Write a proportional equation for *u* in terms of *t*. Use a whole number or **fraction**, not a decimal, in your equation.

75. A four-sided figure is resized to create a scaled copy. The proportional relationship between any given side length in the original figure, *f*, and the corresponding side length in the scaled copy, *s*, can be represented by the equation $s = 4f$. What is the scale factor from the original figure to the scaled copy?

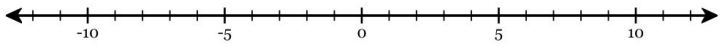
76. Point C is located at -8. Plot Point C on the number line below.



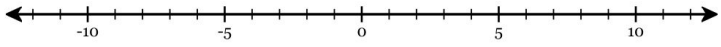
77. Point Y is located at 8. Plot Point Y on the number line below.



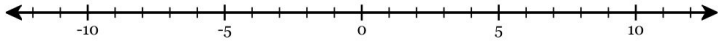
78. Point W is located at -2. Plot Point W on the number line below.



79. Point Q is located at 6. Plot Point Q on the number line below.



80. Point W is located at 11. Plot Point W on the number line below.



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

9 -7 -15 -18 -6 -11

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

20 -12 -14 -7 19 -15

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

-11 -7 -12 6 -20 -14

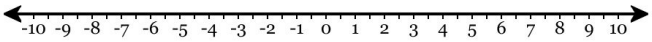
84. Write the numbers below in order from least to greatest. Use commas to separate.

-13 -3 -16 18 4 -5

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

-5 -7 -15 -4 14 11

86. Plot -8 and -8½ on the number line below.

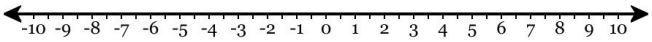


Determine which number is greater.

Fill in the blank with < or >: -8 _____ -8½

-8 is (greater than / less than) -8½ because it is further to the (left / right) on the number line.

87. Plot -5 and -7 on the number line below.

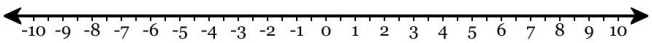


Determine which number is greater.

Fill in the blank with < or >: -5 _____ -7

-5 is (greater than / less than) -7 because it is further to the (left / right) on the number line.

88. Plot 2 and -10 on the number line below.

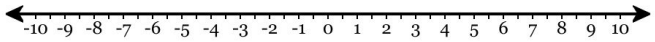


Determine which number is greater.

Fill in the blank with < or >: 2 _____ -10

2 is (greater than / less than) -10 because it is further to the (left / right) on the number line.

89. Plot 5 and -2 on the number line below.

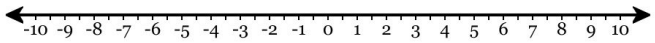


Determine which number is greater.

Fill in the blank with < or >: 5 _____ -2

5 is (greater than / less than) -2 because it is further to the (left / right) on the number line.

90. Plot -6 and -2½ on the number line below.



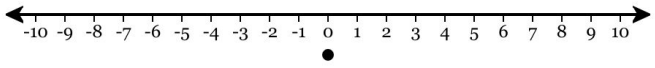
Determine which number is greater.

Fill in the blank with < or >: -6 _____ -2½

-6 is (greater than / less than) -2½ because it is further to the (left / right) on the number line.

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

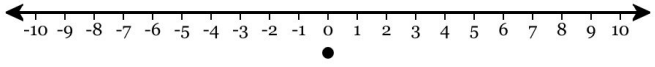
$$-9+5$$



$$-9+5=\_\_\_\_$$

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

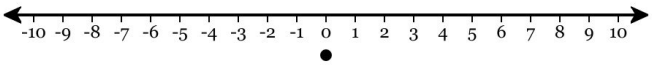
$$2+(-3)$$



$$2+(-3)=\_\_\_\_$$

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

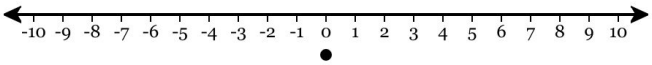
$$-3 + (-7)$$



$-3 + (-7) =$ ____

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

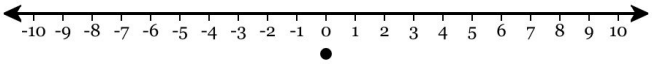
$$-7 + 10$$



$-7 + 10 =$ ____

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

$$6 + 2$$



$6 + 2 =$ ____

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

$$1 - 11$$

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

$$-16 - (-19)$$

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

$$20 - (-6)$$

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

$$-9 - 13$$

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

$$6 - 3$$

101. Compute:

$$-2 + (-7)$$

102. Compute:

$$-7 - (-9)$$

103. Compute:

$$(-6) - 7$$

104. Compute:

$$11 - (-2)$$

105. Compute:

$$-12 + 12$$

106. 15 is what percent of 500?

107. What is 47% of 700?

108. 99 is what percent of 225?

109. 24 is what percent of 200?

110. What is 64% of 600?

111. Combine like terms.

$$y^3 - 2y^3 + 3y^3 - 2x^3 + 5x + 3x - 7x^3$$

112. Combine like terms.

$$-7y - 2 - 4x - 2y + 6x + 6y - 2$$

113. Combine like terms.

$$-5y - 5x + 5y + 5y - x + 2 - 2$$

114. Combine like terms.

$$-6x^2 + 7x + 4x^2 - 3x - 3y - 2x + 4x^2$$

115. Combine like terms.

$$-7y^2 + 6x^3 + 3y^2 - 4x^3 - 6 - 2 - 2$$

116. Which expression is equivalent to $t + 3t - 7$?

A. $-3t$ B. $-9t$

C. $-7 + 4t$ D. $t - 4$

117. A triangle has side lengths of $(3k + 10)$ centimeters, $(7k + 8)$ centimeters, and $(6m + 10)$ centimeters. Which expression represents the perimeter, in centimeters, of the triangle?

A. $15 + 16m + 13k$

B. $10k + 16m + 18$

C. $28k + 16m$

D. $28 + 6m + 10k$

118. The width of a rectangle measures $(10m - n)$ centimeters, and its length measures $(10m + 3n)$ centimeters. Which expression represents the perimeter, in centimeters, of the rectangle?

A. $40m + 4$ B. $40m - 1 + 6n$

C. $40m + 4n$ D. $2 + 20m$

119. Which expression is equivalent to $4u + 5 - 10u + 2$?

A. $9u - 8$ B. $7 - 6u$

C. $-6u + 3$ D. $14u + 3$

120. Which expression is equivalent to $c - 5c + 3c$?

A. $1 - 2c$ B. $9c$ C. $-c$ D. $c - 2$

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

$$3(10f + 9g)$$

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

$$3(4m + 4)$$

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

$$10(h - 9k + 7)$$

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

$$2(6v + 3w - 4)$$

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

$$5(6v + 8w - 2)$$

126. Write an equivalent expression by distributing the "−" sign outside the parentheses:

$$-2t - (-2.6u + 7)$$

127. Write an equivalent expression by distributing the "−" sign outside the parentheses:

$$-(-9t - 9.3u + 8)$$

128. Write an equivalent expression by distributing the "−" sign outside the parentheses:

$$-(9f - 9.1)$$

129. Write an equivalent expression by distributing the "−" sign outside the parentheses:

$$-(1.7r + 3s) + 5.3$$

130. Write an equivalent expression by distributing the "−" sign outside the parentheses:

$$-(-7w + 2.4x - 6)$$

131. Which expression is equivalent to the expression below?

$$9m + 4(8n + 5m)$$

A. $9(m + 32n + 20m)$ B. $3m + 9n$

C. $29m + 32n$ D. $23m + 5n$

132. Which expression is equivalent to the expression below?

$$4(5f) + f$$

A. $20f + 5f^2$ B. $21f$

C. $24f$ D. $6f + 4$

133. Which expression is equivalent to the expression below?

$$n + n + n + n + n$$

A. $5n$ B. $\frac{n}{5}$ C. 5 D. $5 + n$

134. Which pair of expressions below are equivalent?

A. $6r + 3r$ and $9r^2$

B. $6(3r - 8)$ and $18r - 48$

C. $6r - 3s$ and $3s - 6r$

D. $6(3r - 8)$ and $18r - 8$

135. Which expression is equivalent to the expression below?

$$8q - 4r + q + q + q + q$$

A. $8q$ B. $0q$

C. $4q - 4r$ D. $12q - 4r$

136. Rewrite in simplest terms: $4n - 8(7n - 7)$

137. Rewrite in simplest terms: $3(7p + 1) - 2p$

138. Rewrite in simplest terms:
$-7(2u - 6) + 10(-6u - 4)$

139. Rewrite in simplest terms:
$-8(-4c - 5c - 7) - 6c$

140. Rewrite in simplest terms:
$8(v + 7w) + 8w - 2(8w + 2v)$

141. Use exponents to condense the expression below.

$$a \cdot a \cdot c$$

142. Use multiplication to fully expand the expression below.

$$a^5b^2c$$

143. Use exponents to condense the expression below.

$$b \cdot c \cdot a \cdot a \cdot b \cdot b \cdot c$$

144. Use multiplication to fully expand the expression below.

$$y^8$$

145. Use multiplication to fully expand the expression below.

$$a^5c^6$$

146. Solve for w.

$$8 = w + 10$$

147. Solve for n.

$$-7 = n + 7$$

148. Solve for r.

$$10 = r + 8$$

149. Solve for u.

$$-7 = u + 8$$

150. Solve for x.

$$x + 5 = -2$$

151. Solve for u.

$$55 = -11u$$

152. Solve for b.

$$3b = 18$$

153. Solve for u.

$$-21 = -7u$$

154. Solve for s.

$$-2s = -10$$

155. Solve for b.

$$-30 = 6b$$

156. Solve for x.

$$-3 = \frac{x}{-8}$$

157. Solve for a.

$$\frac{a}{-9} = -8$$

158. Solve for r.

$$\frac{r}{-9} = 7$$

159. Solve for t.

$$9 = \frac{t}{9}$$

160. Solve for x.

$$\frac{x}{-3} = -1$$

161. Solve for a and simplify your answer.

$$-8 = \frac{3}{2}a$$

162. Solve for s and simplify your answer.

$$-\frac{5}{2}s = -10$$

163. Solve for b and simplify your answer.

$$-\frac{5}{2}b = 11$$

164. Solve for x and simplify your answer.

$$-\frac{4}{5}x = 6$$

165. Solve for n and simplify your answer.

$$\frac{3}{2}n = 15$$

166. Solve for b.

$$-11 = -47 - 12b$$

167. Solve for z.

$$-\frac{z}{5} - 37 = -18$$

168. Solve for y.

$$74 = -47 - 11y$$

169. Solve for a.

$$\frac{a}{4} - 23 = -17$$

170. Solve for y.

$$-\frac{y}{5} + 4 = 14$$

171. Solve for x.

$$-0.4 + \frac{x}{0.1} = -15.4$$

172. Solve for y.

$$0.5y + 2.6 = 4.35$$

173. Solve for c.

$$16.2 = \frac{c}{0.2} - 1.3$$

174. Solve for b.

$$-\frac{b}{0.4} + 3.4 = 6.4$$

175. Solve for x.

$$2.1 = 1.1 + \frac{x}{2.2}$$

176. Solve for b.

$$\frac{7}{12}b + 6 = 13$$

177. Solve for z.

$$13 + \frac{1}{4}z = 26$$

178. Solve for x.

$$\frac{5}{12}x + 5 = 20$$

179. Solve for c.

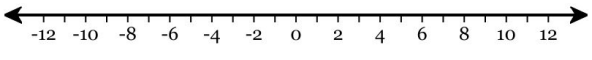
$$19 = \frac{3}{7}c + 1$$

180. Solve for x.

$$40 = 20 - \frac{10}{11}x$$

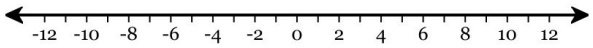
181. Solve for x and graph the solution on the number line below.

$$-12 < 3x$$



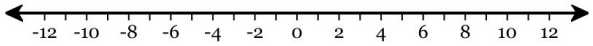
182. Solve for x and graph the solution on the number line below.

$$3 + x < 3$$



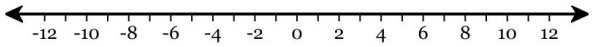
183. Solve for x and graph the solution on the number line below.

$$-4 > \frac{x}{-2}$$



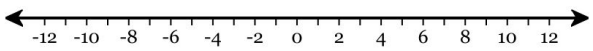
184. Solve for x and graph the solution on the number line below.

$$20 > 2x$$



185. Solve for x and graph the solution on the number line below.

$$-5 > -11 + x$$



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