Name: _____ **Prepare for Algebra 1 Summer Math Assignment (2026)**

1. Round 5.426 to the nearest tenth.

2. Round 2.5 to the nearest whole number.

3. Round 2.8848 to the nearest hundredth.

4. Round 5.4938 to the nearest hundredth.

5. Round 2.67 to the nearest tenth.

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

$$\frac{8}{11} - \frac{1}{10}$$

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

$$\frac{9}{22} + \frac{3}{22}$$

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

$$\frac{5}{4} - \frac{11}{8}$$

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

$$\frac{5}{12} + \frac{4}{9}$$

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

$$\frac{7}{4} + \frac{1}{10}$$

11. Perform the operation and simplify the answer fully.

$$\frac{5}{8} \cdot \frac{2}{3}$$

12. Perform the operation and simplify the answer fully.

$$\frac{\frac{6}{5}}{\frac{3}{4}}$$

13. Perform the operation and simplify the answer fully.

$$\frac{10}{3} \cdot \frac{4}{3}$$

14. Perform the operation and simplify the answer fully.

$$\frac{3}{4} \div \frac{7}{9}$$

15. Perform the operation and simplify the answer fully.

$$\frac{\frac{5}{3}}{\frac{9}{10}}$$

16. Convert $\frac{27}{40}$ into a decimal.

17. Convert $\frac{13}{30}$ into a decimal.

18. Convert $\frac{3}{20}$ into a decimal.

19. Convert $\frac{8}{11}$ into a decimal.

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

21. Convert 0.849 to a fraction in simplest form.

22. Convert 0.22 to a fraction in simplest form.

23. Convert 0.657 to a fraction in simplest form.

24. Convert 0.98 to a fraction in simplest form.

25. Convert 0.938 to a fraction in simplest form.

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

$$2 \times 2 \times 2 \times 2$$

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

$$3^3$$

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

$$1 \times 1 \times 1 \times 1 \times 1 \times 1$$

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

$$1 \times 1 \times 1 \times 1$$

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

$$6^4$$

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

$$(-3)^5$$

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

$$-8 \times -8 \times -8 \times -8$$

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

$$(-10)^5$$

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

$$(-6)^4$$

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

$$(-9)^5$$

36. Use an exponent to condense the expression below. Then compute. Express your answer as a fraction in simplest form.

$$\frac{9}{13} \times \frac{9}{13}$$

37. Use multiplication to expand the expression below. Then compute. Express your answer as a fraction in simplest form.

$$\left(\frac{5}{13}\right)^2$$

38. Use an exponent to condense the expression below. Then compute. Express your answer as a fraction in simplest form.

$$\frac{17}{19} \times \frac{17}{19}$$

39. Use multiplication to expand the expression below. Then compute. Express your answer as a fraction in simplest form.

$$\left(\frac{7}{19}\right)^2$$

40. Use multiplication to expand the expression below. Then compute. Express your answer as a fraction in simplest form.

$$\left(\frac{1}{15}\right)^2$$

41. Use exponents to condense the expression below.

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

42. Use multiplication to fully expand the expression below.

$$a^3b^4c^2$$

43. Use an exponent to condense the expression below.

$$b \cdot b \cdot b \cdot b \cdot b \cdot b \cdot b \cdot b \cdot b \cdot b \cdot b$$

44. Use multiplication to fully expand the expression below.

$$x^6y^4z$$

45. Use multiplication to fully expand the expression below.

$$x^5y^6z$$

46. Use one exponent to condense the expression below. Then compute and/or simplify.

$$4y \cdot 4y \cdot 4y \cdot 4y \cdot 4y$$

47. Use one exponent to condense the expression below. Then compute and/or simplify.

$$abc \cdot abc \cdot abc$$

48. Use multiplication to expand the expression below. Then compute and/or simplify.

$$(-a)^3$$

49. Use multiplication to expand the expression below. Then compute and/or simplify.

$$(-4xy)^3$$

50. Use multiplication to expand the expression below. Then compute and/or simplify.

$$(-xz)^2$$

51. Simplify to a single power of 2:

$$\frac{2^5}{2}$$

52. Simplify to a single power of 6:

$$\left(6^3\right)^5$$

53. Simplify to a single power of 3:

$$3^5 \cdot 3^6$$

54. Simplify to a single power of 3:

$$\left(3^2\right)^5$$

55. Simplify to a single power of 5:

$$\left(5^3\right)^4$$

56. Combine like terms.

$$2 - 4y - 7y^2 + 5y^2 + 5 + 4y - 2y$$

57. Combine like terms.

$$-5 - 2x^2 + 6 - 2y - 2y - 5x^2 + 6x^2$$

58. Combine like terms.

$$-4 - 6x^3 + 3y^2 + 3 + 2 - x^3 - 5y^2$$

59. Combine like terms.

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

60. Combine like terms.

$$-y^3 + 4 + y^3 + 7x^2 + 3 - 5y^3 + 3$$

61. A triangle has side lengths of $(5q + 8)$ centimeters, $(10q - 5)$ centimeters, and $(7r + 9)$ centimeters. Which expression represents the perimeter, in centimeters, of the triangle?

A. $16r + 18q$ B. $12 + 7r + 15q$

C. $16r + 13q + 5$ D. $16r + 3 + 15q$

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

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

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

63. The width of a rectangle measures $(7n + 10)$ centimeters, and its length measures $(9n - 2)$ centimeters. Which expression represents the perimeter, in centimeters, of the rectangle?

A. $8 + 16n$

B. $16 + 32n$

C. $34n + 14$

D. $17n + 7$

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

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

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

65. A triangle has side lengths of $(4p - 3q)$ centimeters, $(6p - 2r)$ centimeters, and $(7r + 6q)$ centimeters. Which expression represents the perimeter, in centimeters, of the triangle?

A. $4q + 4r + 10p$ B. $13qr + pq + 4pr$

C. $qr + 17pr$ D. $10p + 3q + 5r$

66. A triangle has side lengths of $(3.6n + 4.4)$ centimeters, $(7.9n - 1.3)$ centimeters, and $(6.6p + 9.5)$ centimeters. Which expression represents the perimeter, in centimeters, of the triangle?

A. $11.5n + 12.6 + 6.6p$

B. $16.1p + 8n + 6.6$

C. $3.1 + 11.5n + 16.1p$

D. $14.6n + 16.1p$

67. Which expression is equivalent to $-0.83g + g + 0.09$?

A. $0.17g + 0.09$ B. $0.26g$

C. $-0.83g + 1.09$ D. $-1.74g$

68. The width of a rectangle measures $(6.8t - 1.5u)$ centimeters, and its length measures $(5.6t - 8.4u)$ centimeters. Which expression represents the perimeter, in centimeters, of the rectangle?

A. $12.4t - 9.9$ B. $-16.8u + 24.8t - 1.5$

C. $24.8t - 19.8u$ D. $24.8t - 19.8$

69. The width of a rectangle measures $(7.3a + 6.7)$ centimeters, and its length measures $(8.4a + 2.7)$ centimeters. Which expression represents the perimeter, in centimeters, of the rectangle?

A. $31.4a + 18.8$ B. $22.2 + 28a$

C. $9.4 + 15.7a$ D. $14a + 11.1$

70. Which expression is equivalent to $9.8s - 7.8 + 8.7s + 3.9$?

A. $2s + 12.6$ B. $-3.9 + 18.5s$

C. $18.5s - 11.7$ D. $1.1s - 11.7$

71. Write an equivalent expression by distributing the "$-$" sign outside the parentheses:

$$-(-3k - 2.8)$$

72. Write an equivalent expression by distributing the "$-$" sign outside the parentheses:

$$-(6u + 1.8v + 2.7)$$

73. Write an equivalent expression by distributing the "$-$" sign outside the parentheses:

$$-(-8.2x + 7y) + 7$$

74. Write an equivalent expression by distributing the "$-$" sign outside the parentheses:

$$-(-t + 8.7u) - 5.7$$

75. Write an equivalent expression by distributing the "$-$" sign outside the parentheses:

$$-k - (-9.3m + 0.3)$$

76. What is the value of the expression $9z - 1$ when $z = 9$?

77. What is the value of the expression $8x^2 - 7x + 3$ when $x = 2$?

78. What is the value of the expression $8w - 6x$ when $w = 9$ and $x = 9$?

79. What is the value of the expression $2y^2 + 4y + 7$ when $y = 5$?

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

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

$$6(5n - 3p + 2)$$

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

$$2(4h + 4k - 2)$$

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

$$8(8p + 10)$$

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

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

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

$$2(2v + 2w - 2)$$

86. Enter the missing values in the area model to find $10(7p - 4)$

	7p	___
10	_____	-40

According to the model above, $10(7p - 4) =$ _____

87. Enter the missing values in the area model to find $2(3f + 4)$

	___	+4
2	6f	_____

According to the model above, $2(3f + 4) =$ _____

88. Enter the missing values in the area model to find $3(2y - 10)$

	2y	___
3	_____	-30

According to the model above, $3(2y - 10) =$ _____

89. Enter the missing values in the area model to find $10(9f - 6)$

	9f	-6
10	_____	_____

According to the model above, $10(9f - 6) =$ _____

90. Enter the missing values in the area model to find $3(5s + 3)$

	___	+3
3	15s	_____

According to the model above, $3(5s + 3) =$ _____

91. Which expression is equivalent to the expression below?

$$x + x + x + x + x + x + y + y + y + y$$

A. $6x + 4y$ B. x^6y^4

C. $\frac{x}{6} + \frac{y}{4}$ D. $10xy$

92. Which pair of expressions below are equivalent?

A. $s + s + s + t$ and $4st$

B. $3s + 9t$ and $9t + 3s$

C. $3s - 9t$ and $9t - 3s$

D. $s + s + s + s + s + s$ and s^6

93. Which expression is equivalent to the expression below?

$$8(8t) + 3t$$

A. $11t + 8$ B. $32t$

C. $67t$ D. $64t + 8t^2$

94. Which expression is equivalent to the expression below?

$$7y - 6z + y + y + y + y$$

A. $-3y$ B. $11y - 6z$

C. $5y$ D. $3y - 6z$

95. Which expression is equivalent to the expression below?

$$x + x + x + x + x + x$$

A. $6 + x$ B. x^6 C. 6 D. $6x$

96. Solve for n.

$$-7 = n + 7$$

97. Solve for t.

$$t - 2 = 7$$

98. Solve for y.

$$9 = -9 + y$$

99. Solve for b.

$$5 = b + 7$$

100. Solve for s.

$$6 + s = -10$$

101. Solve for n.

$$30 = -10n$$

102. Solve for r.

$$30 = 6r$$

103. Solve for u.

$$10u = 40$$

104. Solve for a.

$$-22 = 11a$$

105. Solve for y.

$$-66 = -11y$$

106. Solve for r. You must write your answer in fully simplified form.

$$6 = 13r$$

107. Solve for r. You must write your answer in fully simplified form.

$$-4 = -5r$$

108. Solve for w. You must write your answer in fully simplified form.

$$-3w = 3$$

109. Solve for a. You must write your answer in fully simplified form.

$$-7a = -5$$

110. Solve for b. You must write your answer in fully simplified form.

$$1 = -5b$$

111. Solve for s.

$$\frac{s}{2} = -4$$

112. Solve for w.

$$7 = \frac{w}{2}$$

113. Solve for b.

$$3 = \frac{b}{-5}$$

114. Solve for b.

$$\frac{b}{-8} = -2$$

115. Solve for n.

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

116. Solve for y and simplify your answer.

$$\frac{2}{3}y = -6$$

117. Solve for n and simplify your answer.

$$\frac{4}{3}n = -14$$

118. Solve for n and simplify your answer.

$$14 = -\frac{4}{3}n$$

119. Solve for y and simplify your answer.

$$\frac{5}{2}y = 10$$

120. Solve for a and simplify your answer.

$$-9 = \frac{5}{6}a$$

121. Solve for a.

$$-50 = 6a + 28$$

122. Solve for b.

$$14 - \frac{b}{8} = 17$$

123. Solve for x.

$$41 - 3x = 80$$

124. Solve for b.

$$43 - \frac{b}{3} = 59$$

125. Solve for x.

$$-22 - \frac{x}{9} = -19$$

126. Solve for y.

$$35.6 = -\frac{y}{0.1} - 1.4$$

127. Solve for z.

$$-3 = -1.6z - 2.2$$

128. Solve for x.

$$-11.95 = 3.5x - 2.5$$

129. Solve for b.

$$-1.6 + 1.3b = -1.34$$

130. Solve for y.

$$-0.25 = 1.5y - 3.4$$

131. Solve for z.

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

132. Solve for z.

$$-\frac{2}{5}z + 2 = 40$$

133. Solve for y.

$$-8 = -14 + \frac{1}{12}y$$

134. Solve for a.

$$3 = \frac{1}{9}a + 1$$

135. Solve for x.

$$20 = 16 - \frac{1}{4}x$$

136. Solve for y. Express your answer as a proper or improper fraction in simplest terms.

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

137. Solve for z. Express your answer as a proper or improper fraction in simplest terms.

$$-\frac{1}{7} = \frac{1}{3}z - \frac{2}{3}$$

138. Solve for x. Express your answer as a proper or improper fraction in simplest terms.

$$-\frac{3}{8} = -\frac{1}{6} + \frac{1}{5}x$$

139. Solve for c. Express your answer as a proper or improper fraction in simplest terms.

$$\frac{1}{3} - \frac{5}{12}c = -\frac{2}{3}$$

140. Solve for c. Express your answer as a proper or improper fraction in simplest terms.

$$-\frac{2}{3} = \frac{1}{5}c + \frac{1}{3}$$

141. Which equation has the solution $x = 7$?

A. $3x - 1 = 44$ B. $5x - 4 = 27$

C. $2x - 3 = -11$ D. $7x + 7 = 56$

142. What value of w makes the equation below true?

$$2w - 3 = 9$$

A. 2 B. 6 C. 15 D. 16

143. Which equation has the solution $x = 3$?

A. $7x + 1 = 85$ B. $4x - 2 = -10$

C. $5x - 5 = 10$ D. $5x + 2 = 19$

144. What value of x makes the equation below true?

$$9x - 10 = 53$$

A. 7 B. 8 C. 17 D. 53

145. Which equation has the solution $x = 3$?

A. $6x - 6 = -12$ B. $3x - 9 = 24$

C. $5x - 7 = 14$ D. $7x - 8 = 13$

146. Which value of x satisfies the equation $\frac{1}{3}\left(x - \frac{5}{2}\right) = \frac{1}{2}$?

A. 3 B. -4 C. -3 D. 4

147. Which value of x satisfies the equation $\frac{1}{4}\left(x + \frac{3}{4}\right) = -\frac{25}{16}$?

A. 7 B. -7 C. 6 D. -6

148. Which value of x satisfies the equation $\frac{3}{2}\left(x + \frac{3}{4}\right) = \frac{21}{8}$?

A. -2 B. -1 C. 2 D. 1

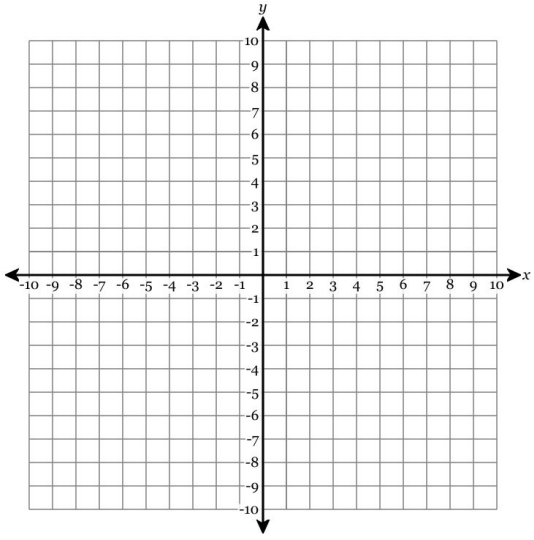
149. Which value of x satisfies the equation $\frac{1}{3}\left(x + \frac{3}{2}\right) = \frac{11}{6}$?

A. -4 B. -5 C. 4 D. 5

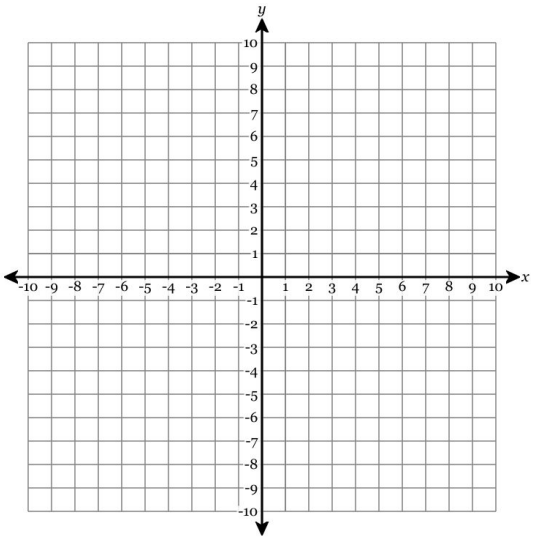
150. Which value of x satisfies the equation $\frac{4}{5}\left(x - \frac{1}{3}\right) = \frac{68}{15}$?

A. 6 B. 5 C. -5 D. -6

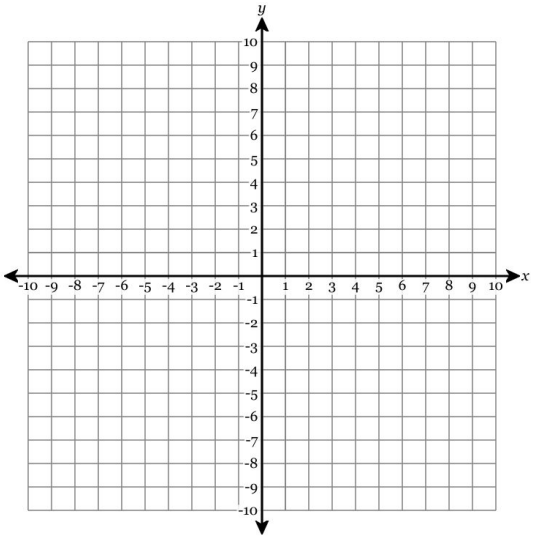
151. Plot the point $(5, -4)$.



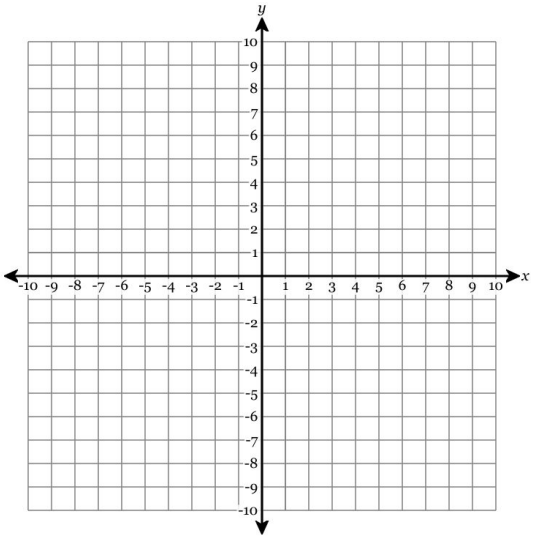
152. Plot the point $(4, 8)$.



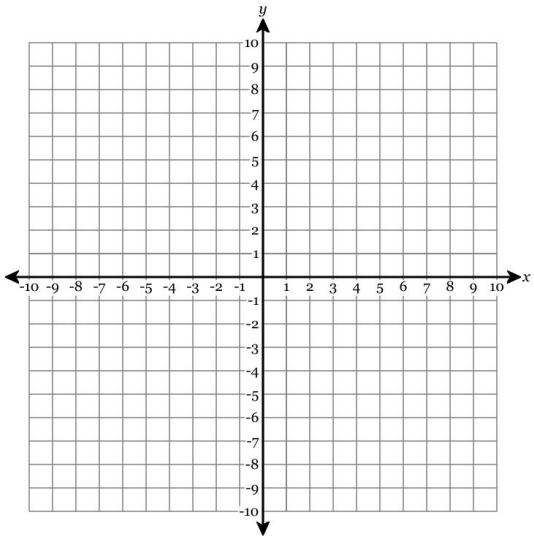
153. Plot the point $(4, 4)$.



154. Plot the point $(2, 0)$.

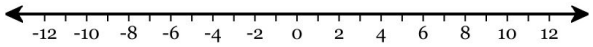


155. Plot the point $(-5, -2)$.



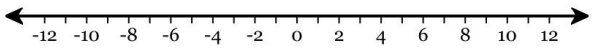
156. Solve for x and graph the solution on the number line below.

$$-6x < 54$$



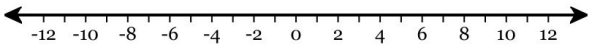
157. Solve for x and graph the solution on the number line below.

$$6x \leq -60$$



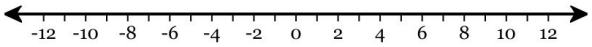
158. Solve for x and graph the solution on the number line below.

$$9 \geq x - 3$$



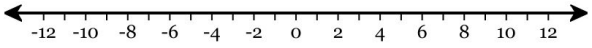
159. Solve for x and graph the solution on the number line below.

$$35 \geq 5x$$



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

$$6 \leq 7 + x$$



161. Which inequality is true when the value of r is -11?

A. $-r-1 \leq 2$ B. $-r-1 \leq -2$

C. $r-1 \geq -2$ D. $-r-1 \geq 2$

162. Which inequality is true when the value of q is 13?

A. $-q+9 \geq -2$ B. $q+9 \geq -2$

C. $-q+9 \geq 2$ D. $q+9 \leq -2$

163. Which inequality is true when the value of u is -16?

A. $-u-4 > -9$ B. $-u-4 < -9$

C. $u-4 > 9$ D. $-u-4 < 9$

164. Which inequality is true when the value of q is -8?

A. $-q-7 < -4$ B. $-q-7 > 4$

C. $-q-7 < 4$ D. $q-7 > 4$

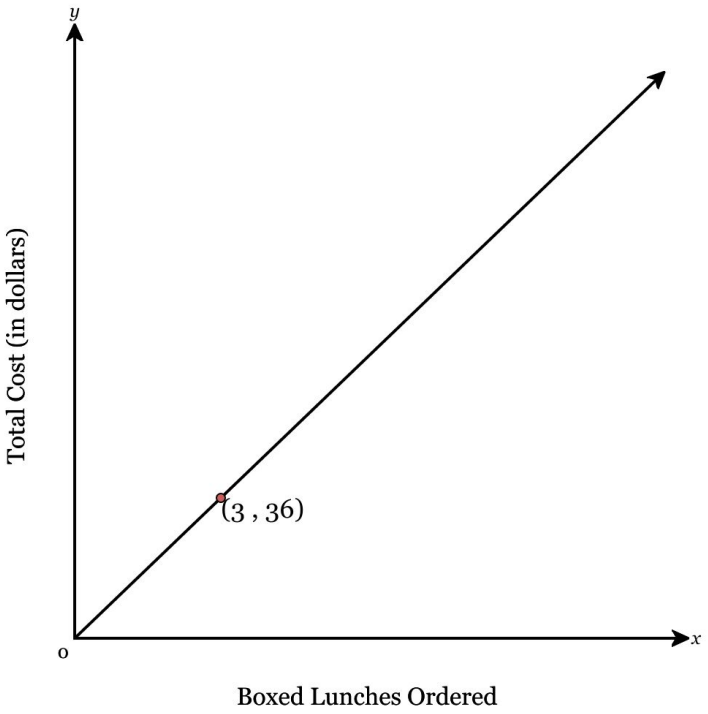
165. Which inequality is true when the value of v is 14?

A. $v+1 < -4$ B. $-v+1 < -4$

C. $-v+1 > 4$ D. $-v+1 > -4$

166. 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

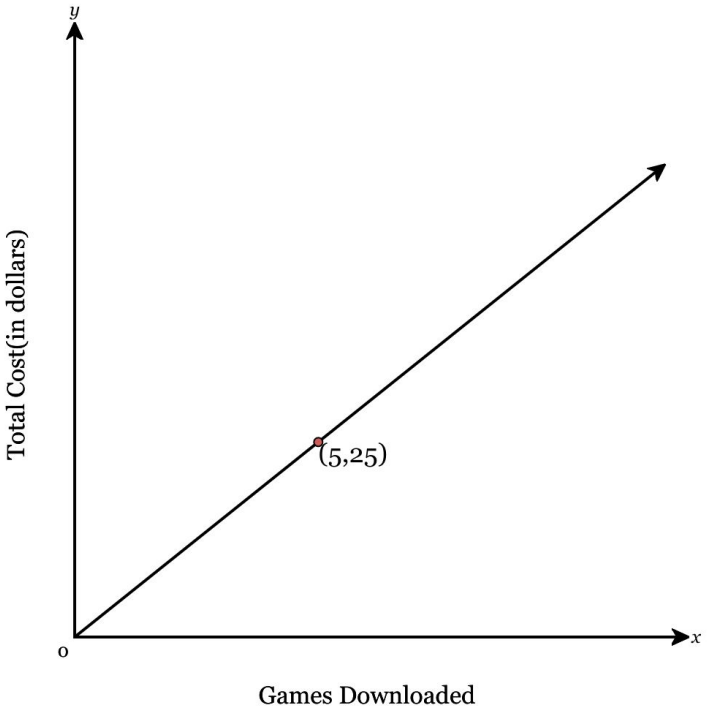
B. The unit rate is 12 lunches per dollar

C. The unit rate is \$36.00 per lunch

D. The unit rate is 3 lunches per dollar

167. Isaiah 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 ratio of total cost (in dollars) to the number of games downloaded?



A. $1 : 5$

B. $4 : 1$

C. $1 : 6$

D. $5 : 1$

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

If the point $(8, 48)$ lies on the graph, what does the ordered pair $(8, 48)$ indicate?

A. 48 pounds of Swiss cheese cost a total of $8.00

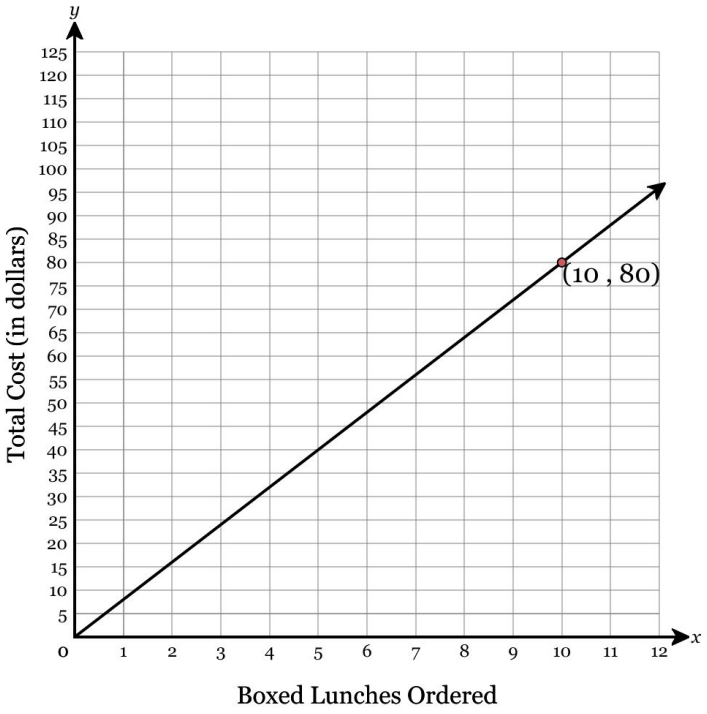
B. 8 pounds of Swiss cheese cost $48.00 each

C. 8 pounds of Swiss cheese cost a total of $48.00

D. 48 pounds of Swiss cheese cost $8.00 each

169. 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.

What does the ordered pair $(10, 80)$ indicate?



A. 10 lunches that cost a total of $80.00

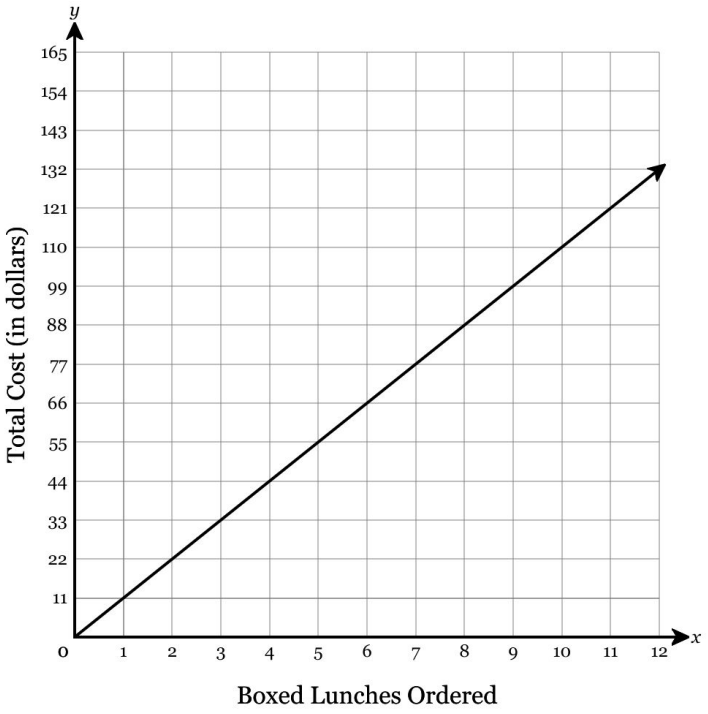
B. 80 lunches that cost a total of $10.00

C. 10 lunches that cost $80.00 each

D. 80 lunches that cost $10.00 each

170. 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.

What point on the graph represents the unit rate?



A. $(1\,,\,11)$

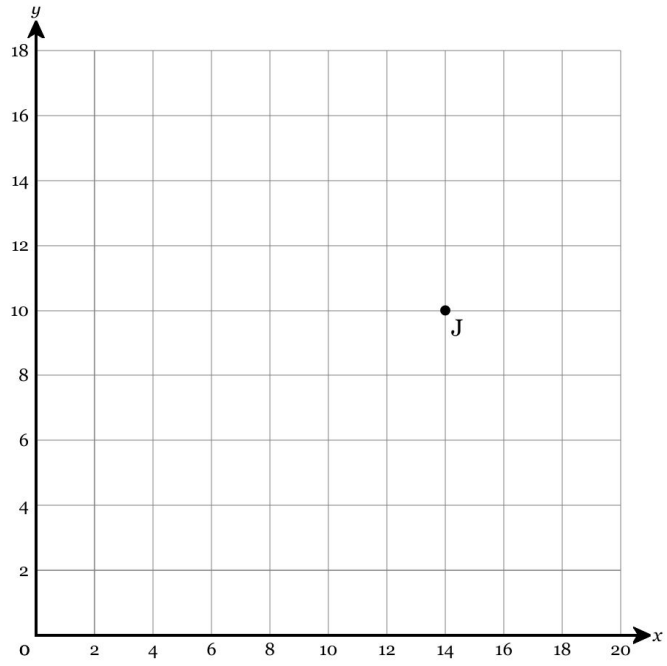
B. $(11\,,\,1)$

C. $(0\,,\,0)$

D. $(2\,,\,22)$

171. Line JK represents a proportional relationship. Point J lies at $(14, 10)$ as shown on the graph below.

Which ordered pair could represent the coordinates of point K?



A. $(12.5\,,\,17.5)$

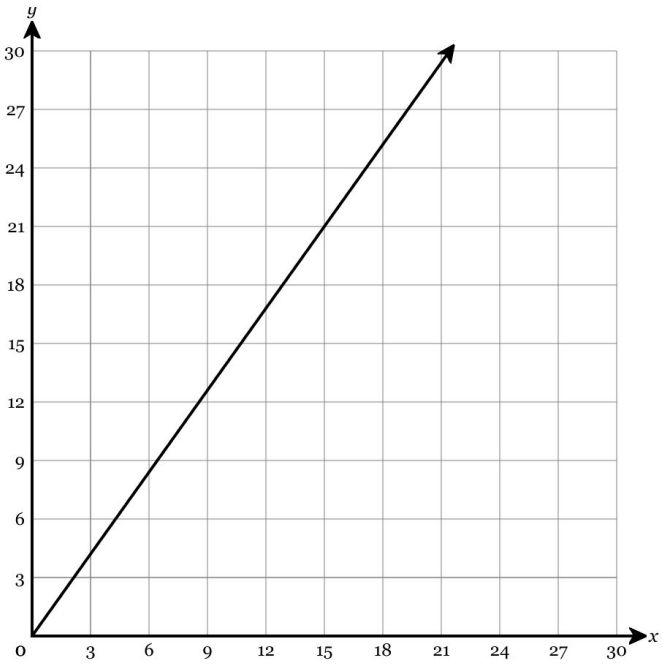
B. $(7.5\,,\,10.5)$

C. $(0.7\,,0)$

D. $(10.5\,,\,7.5)$

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

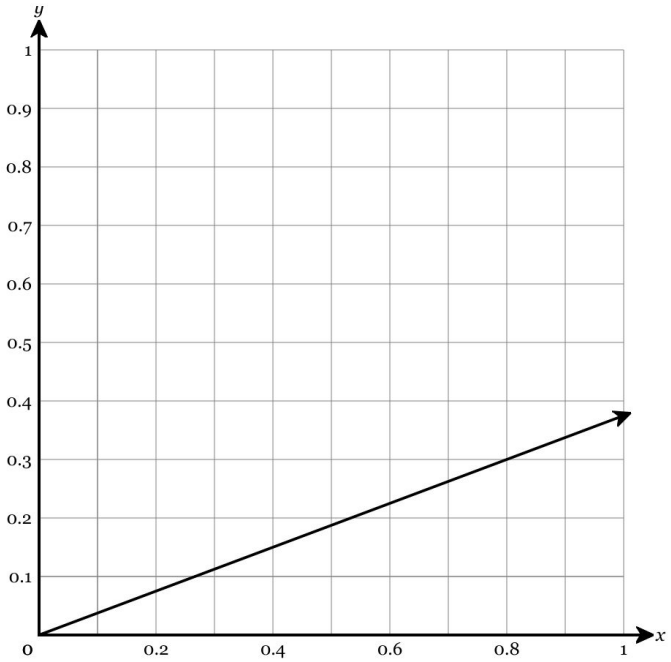
What is the constant of proportionality as shown in the graph?



A. $\frac{7}{12}$ B. $\frac{7}{5}$ C. $\frac{1}{5}$ D. $\frac{5}{12}$

173. 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.

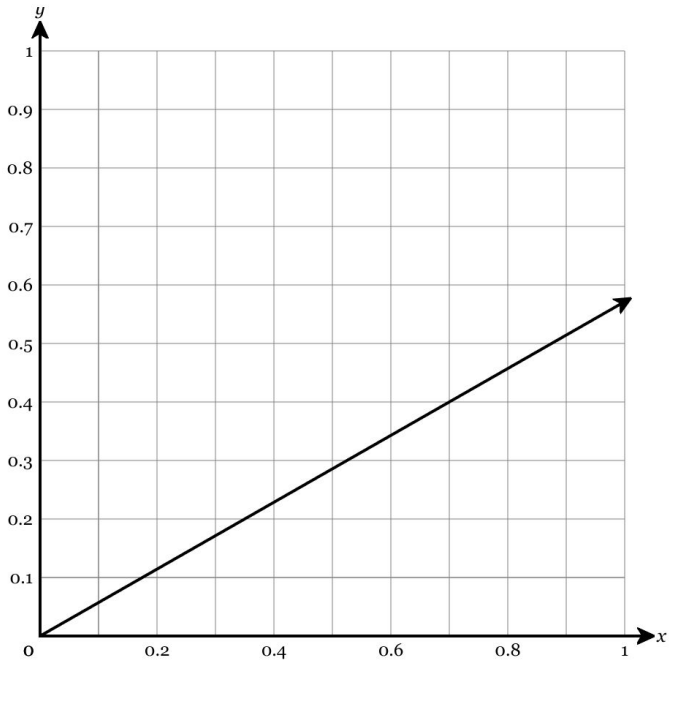
What is the constant of proportionality as shown in the graph?



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

174. 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.

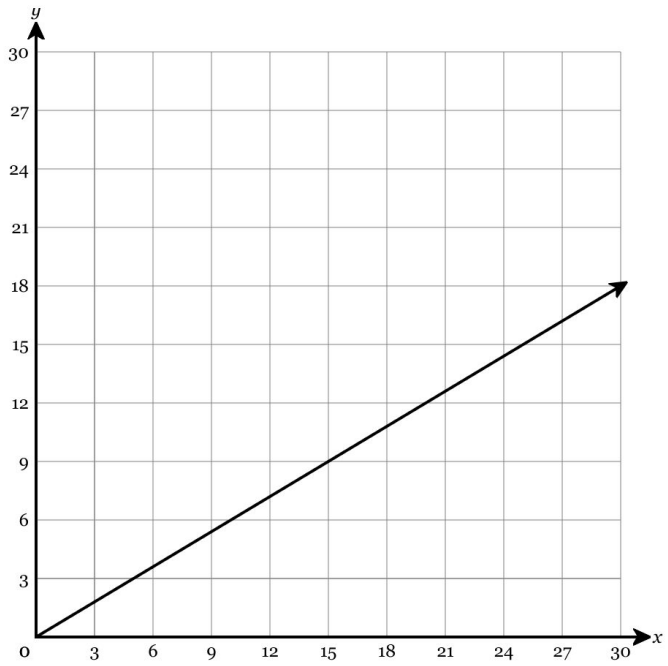
What is the constant of proportionality as shown in the graph?



A. $\frac{4}{11}$ B. $\frac{4}{7}$ C. $\frac{7}{11}$ D. $\frac{1}{4}$

175. An alloy is a combination of two or more metals. A certain alloy of metal is made up of gold and nickel. The relationship between the number of grams of gold 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. $\frac{1}{2}$ B. $\frac{3}{8}$ C. $\frac{5}{8}$ D. $\frac{3}{5}$

176. Which expression is equivalent to $6^{-1} \times 6^{-1}$?

A. 6 B. 36 C. $\frac{1}{36}$ D. 1

177. Which expression is equivalent to $\frac{3^{-7}}{3^{-1}}$?

A. $\frac{1}{3^6}$ B. $\frac{1}{3^7}$ C. 3^7 D. 3^8

178. Which expression is equivalent to $\left(5^2\right)^0$?

A. $\frac{1}{25}$ B. 5 C. 0 D. 1

179. Which expression is equivalent to $5^{-6} \times 5^{-5}$?

A. 5^{30}

B. 5^{11}

C. 5

D. $\frac{1}{5^{11}}$

180. Which expression is equivalent to $3^{0} \cdot 3^{-3}$?

A. 1 B. $\frac{1}{3^{3}}$ C. 0 D. 3^{3}

Scan the QR code or visit deltamath.com/qr/3GR7T-8XU96 to view full solutions.