

Name: _____ Class: _____ Date: _____

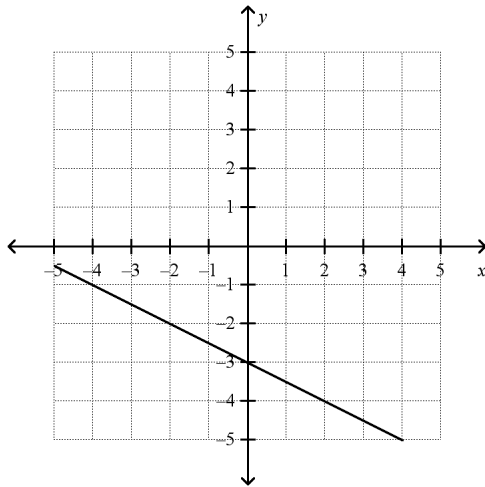
Summer Review for Students entering Algebra 1 Honors 2018

Multiple Choice

Identify the choice that best completes the statement or answers the question.

Find the slope of the line.

_____ 1.



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

B. $-\frac{1}{2}$

C. -2

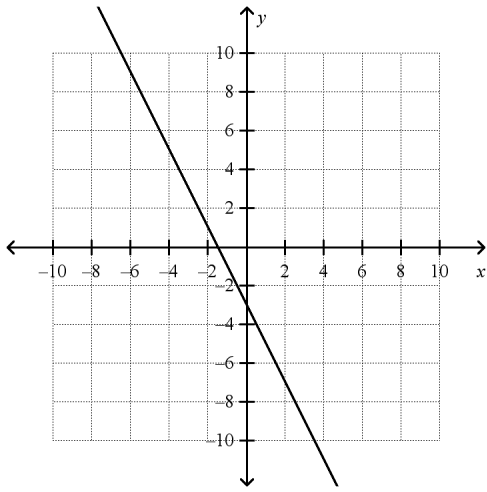
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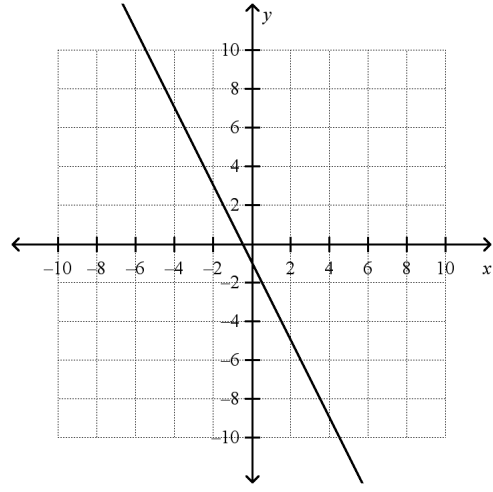
Graph the equation.

_____ 2. $y = -2x - 3$

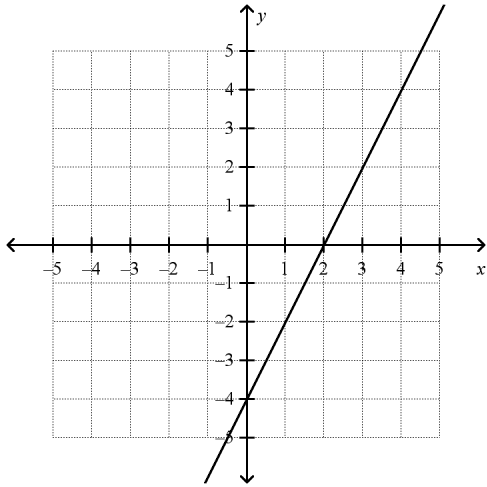
A.



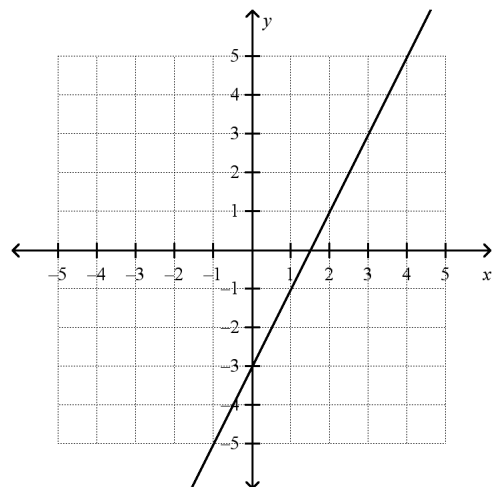
C.



B.



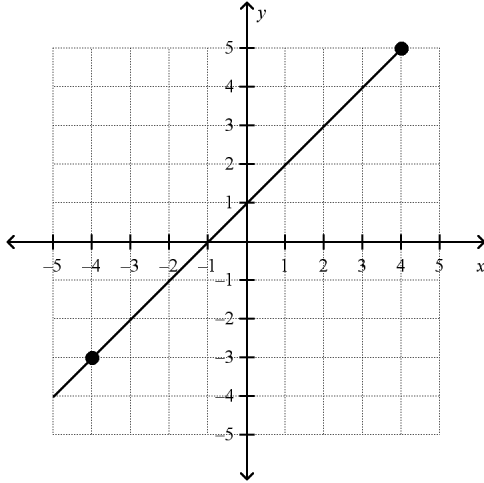
D.



Name: _____

What is an equation of the line?

_____ 3.



A. $y + 3 = (x + 4)$

B. $y - 3 = 2(x - 4)$

C. $y + 3 = -(x - 4)$

D. $y + 5 = 2(x + 4)$

What is the slope of the line that passes through the pair of points?

_____ 4. (1, 7), (10, 1)

A. $\frac{3}{2}$

B. $-\frac{2}{3}$

C. $-\frac{3}{2}$

D. $\frac{2}{3}$

_____ 5. (-5.5, 6.1), (-2.5, 3.1)

A. -1

B. 1

C. -1

D. 1

Find the value of x that completes the statement.

_____ 6. $\frac{2}{5} = \frac{8}{x}$

A. 1.3

B. 40

C. 3.2

D. 20

_____ 7. $\frac{x}{36} = \frac{10}{6}$

A. 10

B. 60

C. $\frac{108}{5}$

D. $\frac{5}{3}$

Add or subtract. Write each answer in simplest form. YOU MAY NOT USE A CALCULATOR.

_____ 8. $\frac{5}{12} - \frac{3}{12}$

A. $\frac{1}{3}$

B. $\frac{1}{6}$

C. $\frac{1}{12}$

D. $\frac{2}{3}$

Name: _____

_____ 9. $\frac{1}{5} + \frac{2}{12}$
A. $\frac{29}{60}$ B. $\frac{1}{20}$ C. $\frac{11}{30}$ D. $\frac{3}{17}$

_____ 10. $\frac{6}{10} + \frac{9}{10}$
A. $2\frac{7}{10}$ B. $5\frac{2}{5}$ C. $\frac{3}{4}$ D. $1\frac{1}{2}$

_____ 11. $\frac{2}{6} - \frac{1}{9}$
A. $\frac{4}{9}$ B. $\frac{1}{18}$ C. $\frac{1}{54}$ D. $\frac{2}{9}$

_____ 12. $6\frac{1}{3} + 5\frac{5}{6}$
A. $11\frac{4}{27}$ B. $12\frac{1}{6}$ C. $11\frac{8}{15}$ D. $12\frac{10}{27}$

What is an algebraic expression for the word phrase?

_____ 13. the difference of r and 3
A. $\frac{r}{3}$ B. $r + 3$ C. $r - 3$ D. $3r$

_____ 14. the quotient of j and 8
A. $\frac{j}{8}$ B. $8j$ C. $j - 8$ D. $j + 8$

_____ 15. A square field has an area of 479 ft². What is the approximate length of a side of the field? Give your answer to the nearest foot.
A. 21 B. 240 C. 23 D. 22

What is the simplified form of each expression?

_____ 16. $\frac{1}{3}(21m + 27)$
A. $63m + 9$ C. $7m + 81$
B. $7m + 9$ D. $7m + 27$

_____ 17. $(4 - c)(-1)$
A. $4 - c$ B. $-4 + c$ C. $4 + c$ D. $-4 - c$

What is the simplified form of each expression?

_____ 18. $-(8d - 3w)$
A. $8d - 3w$ B. $-8d + 3w$ C. $8d + 3w$ D. $-8d - 3w$

Name: _____

- _____ 19. What is the height of a triangle that has an area of 60 yd^2 and a base with a length of 12 yd?
A. 0.1 yd
B. 2.5 yd
C. 5 yd
D. 10 yd

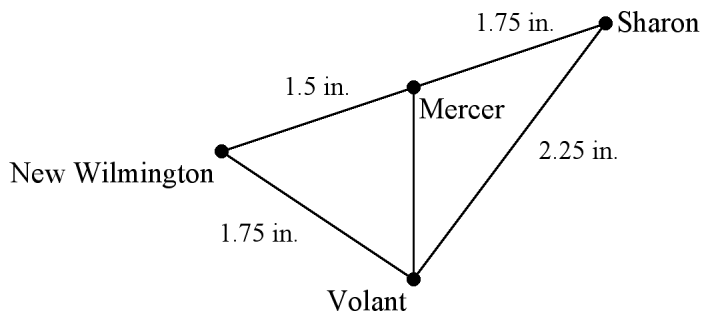
What is the solution of the proportion?

- _____ 20. $\frac{14}{12} = \frac{d}{48}$
A. 56
B. 672
C. 168
D. 576

What is the solution of the proportion?

- _____ 21. $\frac{x-8}{5} = \frac{2}{4}$
A. $\frac{9}{2}$
B. $\frac{5}{2}$
C. $\frac{21}{2}$
D. 18

Use the scale and map measurements to find the actual distance from New Wilmington to Sharon through the specified town.



Scale 1 in. : 12 mi

- _____ 22. What is the actual distance from New Wilmington to Sharon through Volant?
A. 96 mi
B. 72 mi
C. 48 mi
D. 24 mi
- _____ 23. A map has a scale of 1 cm : 18 km. Two cities are 2.7 cm apart on the map. To the nearest tenth of a kilometer, what is the actual distance corresponding to the map distance?
A. 48.6 km
B. 66.6 km
C. 138.6 km
D. 51.3 km
- _____ 24. Two rectangles are similar. One has a length of 10 cm and a width of 8 cm, and the other has a width of 7 cm. Find the length of the second rectangle. Round to the nearest tenth if necessary.
A. 8.8 cm
B. 6.6 cm
C. 10.1 cm
D. 5.6 cm

Name: _____

- _____ 25. A scale model of a city has scale of 1 cm : 2.5 km. Two buildings in the model are 1.7 cm apart. To the nearest tenth of a kilometer, what is the actual distance between the buildings in the city?
A. 16.8 km B. 6.8 km C. 4.3 km D. 6 km
- _____ 26. Is 112 prime or composite?
A. composite B. prime

Find the greatest common factor of the numbers.

- _____ 27. 14 and 38
A. 5 B. 6 C. 2 D. 4
- _____ 28. 35, 63, and 84
A. 7 B. 14 C. 16 D. 11

Find the least common multiple of the set of numbers.

- _____ 29. 5 and 20
A. 20 B. 100 C. 10 D. 30
- _____ 30. 6, 9, and 12
A. 648 B. 36 C. 18 D. 324
- _____ 31. Identify the fraction that is equivalent to $\frac{5}{7}$.
A. $\frac{25}{28}$ B. $\frac{20}{35}$ C. $\frac{30}{35}$ D. $\frac{25}{35}$

Write the fraction in simplest form.

- _____ 32. $\frac{14}{24}$
A. $\frac{7}{13}$ B. $\frac{2}{3}$ C. $\frac{7}{12}$ D. $\frac{6}{11}$
- _____ 33. $\frac{148}{264}$
A. $\frac{36}{66}$ B. $\frac{37}{64}$ C. $\frac{37}{66}$ D. $\frac{36}{64}$

Write as a decimal.

- _____ 34. $\frac{1}{2}$
A. 0.2 B. 5 C. 2 D. 0.5

Name: _____

- _____ 35. $4\frac{1}{12}$
A. 16 B. $0.\overline{3}$ C. $4.0\overline{83}$ D. $0.0\overline{83}$

Write as a fraction in simplest form.

- _____ 36. 0.32
A. $\frac{32}{99}$ B. $\frac{3}{10}$ C. $\frac{8}{25}$ D. $\frac{99}{32}$
- _____ 37. 0.111111...
A. $\frac{1}{10}$ B. $\frac{11}{100}$ C. $\frac{1}{9}$ D. $\frac{11}{1000}$
- _____ 38. $8\frac{3}{4} - 4\frac{1}{4}$
A. $4\frac{1}{16}$ B. $4\frac{9}{16}$ C. $4\frac{1}{2}$ D. $4\frac{1}{4}$

Multiply or divide. Write your answer in simplest form.

- _____ 39. $\frac{3}{6} \times \frac{7}{10}$
A. $\frac{7}{20}$ B. $2\frac{1}{10}$ C. $\frac{5}{7}$ D. $3\frac{1}{2}$
- _____ 40. $\frac{5}{12} \div \frac{2}{8}$
A. $3\frac{1}{3}$ B. $1\frac{2}{3}$ C. 20 D. $\frac{5}{48}$
- _____ 41. $1\frac{1}{3} \times 1\frac{5}{9}$
A. $2\frac{25}{27}$ B. $2\frac{2}{27}$ C. $1\frac{5}{27}$ D. $1\frac{2}{9}$
- _____ 42. $1\frac{1}{3} \div 2\frac{1}{2}$
A. $3\frac{1}{3}$ B. $\frac{1}{3}$ C. $1\frac{7}{8}$ D. $\frac{8}{15}$

Write as a percent.

- _____ 43. 0.63
A. 0.063% B. 6.3% C. 630% D. 63%

Name: _____

- _____ 44. $\frac{1}{5}$
A. 50% B. 5% C. 20% D. 2%
- _____ 45. Write 50% as a decimal.
A. 500 B. 5 C. 0.5 D. 5000
- _____ 46. Write 670% as a fraction or mixed number in simplest form.
A. $\frac{10}{67}$ B. 67 C. $6\frac{7}{10}$ D. $\frac{1}{67}$
- _____ 47. Write $9 \cdot 9 \cdot 9 \cdot 9 \cdot 9 \cdot 9 \cdot 9$ using an exponent.
A. 99^7 B. 7^9 C. 9^7 D. $9 \cdot 7$
- _____ 48. Write 5^2 in standard form.
A. 7 B. 25 C. 10 D. 52
- _____ 49. Write 3954 in expanded form using powers of 10.
A. $(3^3) + (9^2) + (5^1) + (4^0)$
B. $(3 \cdot 10^3) + (9 \cdot 10^9) + (5 \cdot 10^5) + (4 \cdot 10^4)$
C. $(3 \cdot 1000^3) + (9 \cdot 100^2) + (5 \cdot 10^1) + (4 \cdot 1^0)$
D. $(3 \cdot 10^3) + (9 \cdot 10^2) + (5 \cdot 10^1) + (4 \cdot 10^0)$

What is each number written in scientific notation?

- _____ 50. 36,000,000
A. 3.6×10^9 C. 36×10^6
B. 3.6×10^8 D. 3.6×10^7
- _____ 51. -45,000,000
A. 4.5×10^{-7} C. -4.5×10^7
B. -45×10^6 D. 45×10^{-6}
- _____ 52. 0.0000234
A. 2.34×10^{-5} C. 234×10^6
B. 2.34×10^{-6} D. 23.4×10^5

What is each number written in standard notation?

- _____ 53. 3.6×10^6
A. 3,600,000 C. 36,000,000
B. 360,000 D. 36,000
- _____ 54. -3.84×10^{-1}
A. -0.384 C. -0.0000384
B. 38,400,000 D. 3,840,000

Name: _____

- _____ 55. 6.49×10^{-4}
A. 0.00649
B. -0.0649
C. 0.000649
D. -0.0000649

Find the product or quotient. Write the answer in scientific notation and in standard form. Round to the appropriate number of significant digits.

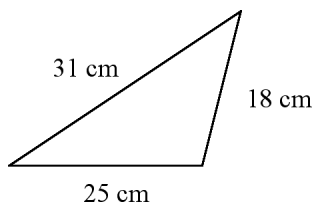
- _____ 56. $(8.55 \times 10^2)(4.36 \times 10^{-4})$
A. 3.73×10^{-6} ; 0.00000373
B. 8.55×10^{-1} ; 0.855
C. 3.73×10^{-1} ; 0.373
D. 1.291×10^{-1} ; 0.1291

- _____ 57. $(-8.35 \times 10^2)(3.14 \times 10^{-4})$
A. -2.62×10^{-6} ; -0.00000262
B. -8.35×10^{-1} ; -0.835
C. -2.62×10^{-1} ; -0.262
D. -5.21×10^{-2} ; -0.521

- _____ 58. $(3.3 \times 10^2) \div (6.43 \times 10^3)$
A. 5.1×10^{-2} ; 0.051
B. 2.122×10^{-2} ; 0.02122
C. 6.43×10^5 ; 0.0643
D. 51×10^1 ; 51

Find the perimeter of the figure.

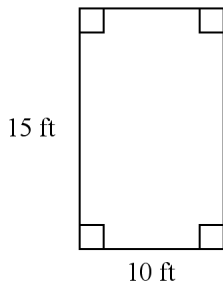
_____ 59.



Drawing not to scale

- A. 74 cm B. 80 cm C. 68 cm D. 87 cm

_____ 60.



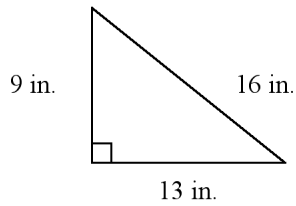
Drawing not to scale

- A. 25 ft B. 60 ft C. 50 ft D. 150 ft

Name: _____

Find the area of the figure.

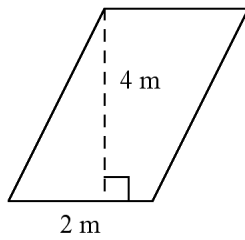
_____ 61.



Drawing not to scale

- A. 38 in.^2 B. 117 in.^2 C. 468 in.^2 D. 58.5 in.^2

_____ 62.

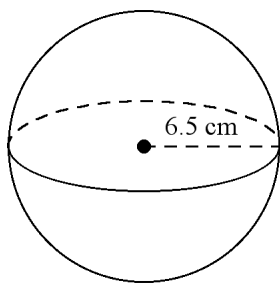


Drawing not to scale

- A. 8 m^2 B. 16 m^2 C. 4 m^2 D. 12 m^2

Find the volume of the solid. Round to the nearest tenth if necessary. Use 3.14 for π .

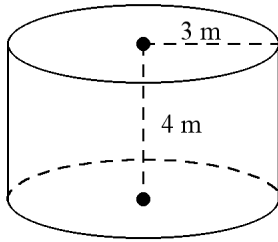
_____ 63.



- A. 3449.3 cm^3 B. 176.9 cm^3 C. 646.7 cm^3 D. 1149.8 cm^3

Name: _____

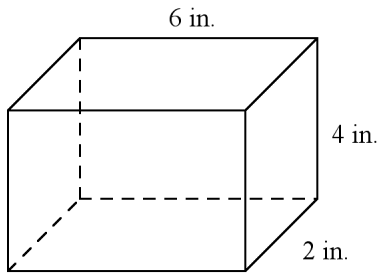
_____ 64.



Drawing not to scale

- A. 226.1 m^3 B. 37.7 m^3 C. 113 m^3 D. 150.7 m^3

_____ 65.

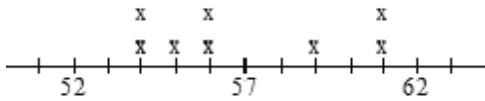


Drawing not to scale

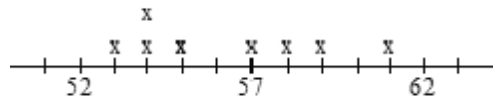
- A. 24 in.^3 B. 96 in.^3 C. 48 in.^3 D. 16 in.^3

_____ 66. Display the set of data in a line plot.
58, 55, 54, 61, 56, 54, 61, 55, 53, 54

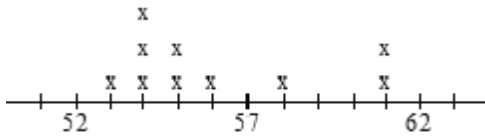
A.



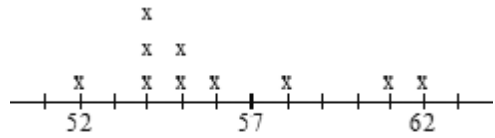
C.



B.



D.

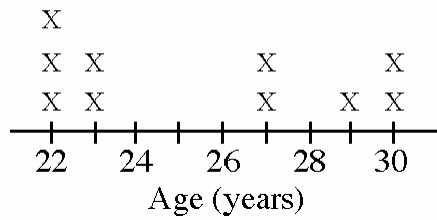


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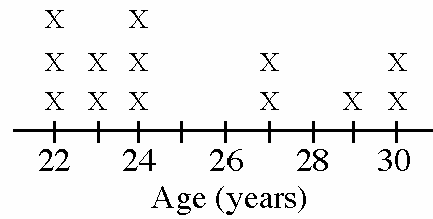
- _____ 67. The frequency table below shows the ages of the first ten people in line at the movie theater. Make a line plot that shows the same data as the frequency table.

Ages	Frequency
22	3
23	2
27	2
29	1
30	2

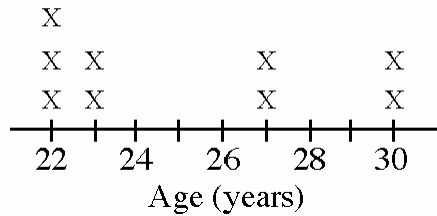
A. Movie Ticket Buyers' Ages



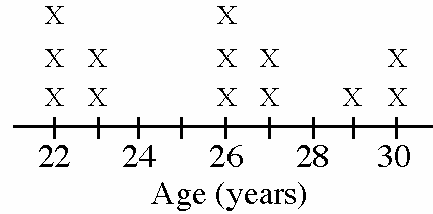
C. Movie Ticket Buyers' Ages



B. Movie Ticket Buyers' Ages



D. Movie Ticket Buyers' Ages



- _____ 68. The table shows how the height of a stack of DVDs depends on the number of DVDs. What is a rule for the height?

Number of DVDs	Height (cm)
2	18
3	27
4	36
n	?

A. $h = 9n$

B. $h = 8n$

C. $h = 2n$

D. $h = \frac{n}{9}$

Name: _____

What is the simplified form of each expression?

- _____ 69. 7^4
A. 343
B. 16,384
C. 16,807
D. 2,401

What is the simplified form of each expression?

- _____ 70. $4(20 + 12) \div (4 - 3)$
A. 29
B. 80
C. 128
D. 92
- _____ 71. $3^3 \cdot 32 + 12 \div 4$
A. 291
B. 219
C. 437
D. 867
- _____ 72. Evaluate $u + xy$, for $u = 18$, $x = 10$, and $y = 8$.
A. 188
B. 36
C. 98
D. 224
- _____ 73. Evaluate $(ab)^2$ for $a = 4$ and $b = 3$.
A. 36
B. 24
C. 81
D. 144

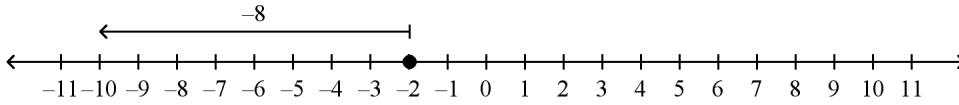
What is the simplified form of each expression?

- _____ 74. $\sqrt{169}$
A. 338
B. 84.5
C. 12
D. 13
- _____ 75. What is the order of $\sqrt{5}$, -0.1 , $-\frac{5}{3}$, 0.7 , $\sqrt{2}$ from least to greatest?
A. $0.7, \sqrt{2}, -\frac{5}{3}, \sqrt{5}, -0.1$
B. $\sqrt{5}, \sqrt{2}, 0.7, -\frac{5}{3}, -0.1$
C. $-\frac{5}{3}, -0.1, 0.7, \sqrt{2}, \sqrt{5}$
D. $-0.1, 0.7, \sqrt{2}, \sqrt{5}, -\frac{5}{3}$

Name: _____

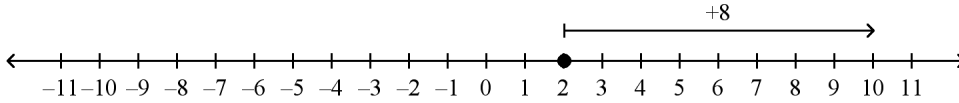
76. Which number line model can you use to simplify $2 + (-8)$?

A.



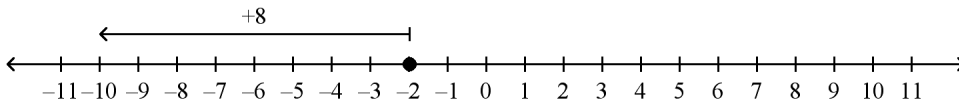
$$2 + (-8) = -10$$

B.



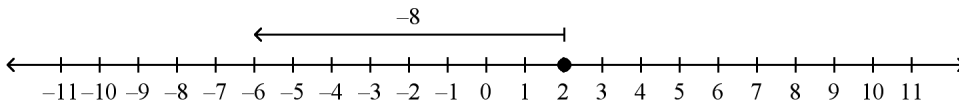
$$2 + (-8) = 10$$

C.



$$2 + (-8) = -10$$

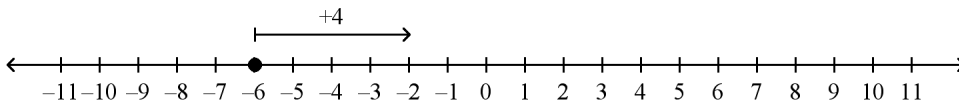
D.



$$2 + (-8) = -6$$

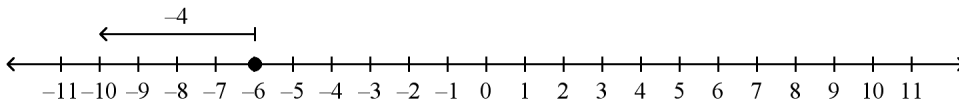
77. Which number line model can you use to simplify $-6 + 4$?

A.



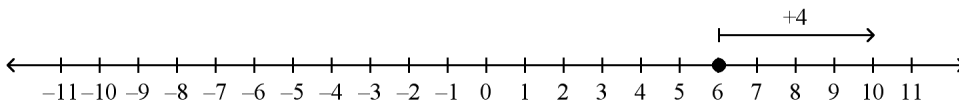
$$-6 + 4 = -2$$

B.



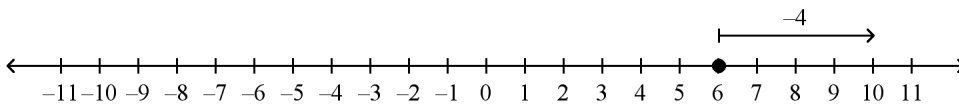
$$-6 + 4 = -10$$

C.



$$-6 + 4 = 10$$

D.



$$-6 + 4 = 10$$

Name: _____

What is each sum? YOU MAY NOT USE A CALCULATOR.

_____ 78. $-7 + 5$
A. -2 B. 12 C. -12 D. 2

_____ 79. $-6 + (-3)$
A. 9 B. -3 C. 3 D. -9

What is each difference? YOU MAY NOT USE A CALCULATOR.

_____ 80. $-1.8 - 3.9$
A. -2.1 B. 5.7 C. 2.1 D. -5.7

What is each product? YOU MAY NOT USE A CALCULATOR.

_____ 81. $8(-1)$
A. -1.4 B. -8 C. 8 D. 11.2

What is the simplified form of each expression?

_____ 82. $-\sqrt{196}$
A. 98 B. -14 C. 14 D. 392

_____ 83. Is $x = 1$ a solution of the equation $2 - 8x = -6$?
A. yes B. no

What is the solution of each equation?

_____ 84. $x + 3 = 17$?
A. 16 C. 13
B. 14 D. 15

_____ 85. $\frac{x}{9} = 10$?
A. 90 C. 99
B. 100 D. 19

_____ 86. Is $(3, 13)$ a solution of the equation $y = 4x$?
A. yes B. no

_____ 87. Which ordered pair is a solution of the equation $y = 3x$?
A. $(-2, -9)$ C. $(-8, -3)$
B. $(-8, -18)$ D. $(-10, -30)$

What is the solution of the equation?

_____ 88. $3 = b + 3$
A. 0 C. 9
B. 1 D. 6

Name: _____

_____ 89. $w - 2 = -3$

A. $-\frac{3}{2}$

B. -5

C. -1

D. 6

_____ 90. $3.4 = 2p$

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

B. 3.4

C. 1.7

D. 0.3

What is the solution of the equation?

_____ 91. $16 = -d + 6$

A. 10

B. -10

C. -9

D. -15

What is the solution of the equation?

_____ 92. $2 = 6p - 8 - 5p$

A. -10

B. -6

C. 2

D. 10

What is the solution of the equation?

_____ 93. $4(y + 2) = 32$

A. 4

B. 6

C. -10

D. 10

What is the solution of the equation?

_____ 94. $6x - 3 = 5x - 5$

A. -4

B. -2

C. 0

D. -1