Pear Assessment

Grade 8: Summer Packet 2024

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1 Which two integers is the irrational number $\sqrt{77}$ between?

(A) 11 and 12

(B) 8 and 9

(C) 10 and 11

(D) 76 and 78

2 A set of ordered pairs is shown below. Choose a value for k that would make the set a function.

$\{(1,2),(3,2),(k,7),(4,-5)\}$

(A) 1

(B) -9

(C) 3

(D) 4

3 Solve for x: $3x+4=9x+3$

(A) $\frac{1}{3}$

(B) $\frac{1}{6}$

(C) $-\frac{1}{3}$

(D) None of the above.

4 What type of number is 4π?

(A) Whole number

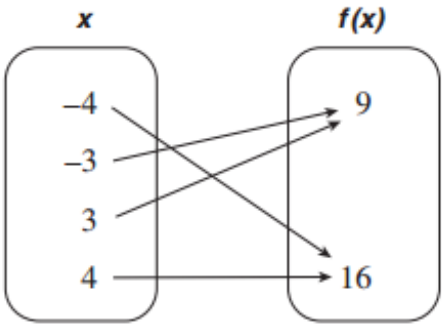
(B) Integer

(C) Rational number

(D) Irrational number

---

5 True or False: The relationship shown in the mapping diagram is a function.



(A) True

(B) False

---

6 Simplify the expression

$12x^{-6}y^{10} \cdot 3x^{7}y$

(A) $15xy^{11}$

(B) $36xy^{10}$

(C) $36x^{-42}y^{10}$

(D) $36xy^{11}$

---

7 Which choice correctly shows the prime factorization of 36?

(A) $2 \times 2 \times 2 \times 3$

(B) $2 \times 2 \times 3 \times 3$

(C) $2 \times 3 \times 3 \times 3$

(D) $1 \times 2 \times 2 \times 3$

---

8 What is the slope of the line that passes through $(5, 4)$ and $(7, 10)$?

(A) 3

(B) -3

(C) 2

(D) -2

---

9 Seven times a number is equal to 12 more than 3 times the number. Find the number.

(A) 3

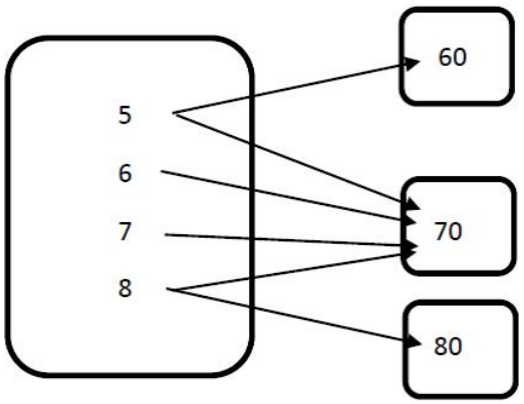
(B) 12/10

(C) 48

(D) 22

---

10 True or False. The mapping diagram shows a function.



(A) True

(B) False

---

11 Simplify the following expression and choose the correct result.

$\left(w^8\right)^8$

(A) w^8

(B) w^{64}

(C) w^{16}

(D) w^9

---

12 Erica wrote the number 3.24×10^{-3} in standard form. Which number did she write?

(A) 0.00324

(B) 0.0324

(C) 0.324

(D) 3240

---

13 True or false: $(6.2 \times 10^8)(3.2 \times 10^3) = 1.984 \times 10^{12}$.

(A) true

(B) false

---

14 Simplify

$\sqrt{\frac{81}{100}}$

---

15 Write $\frac{63}{100}$ as a decimal.

Answer:

---

16 Plot the numbers $2.5, \sqrt{8}, \frac{20}{9}$, and $\frac{\pi}{2}$ on the number line below as accurately as possible.

---

17 Rewrite as a simplified fraction.

$1.\overline{5} = ?$

---

18 Enter the value of the exponential expression 5^0 .

---

19 Solve $3n - 4 = 14$

Put the steps in order to solve the equation from first to last.

- $n = 6$
- Add 4 to both sides
- Divide both sides by 3.

20 Solve the following linear equation for x.

$5\mathrm{x} - 2 + \mathrm{x} = 9 + 3\mathrm{x} + 10$

$\mathrm{x} =$ ____

---

21 Simplify and solve for x.

$5\,(x + 20) = 7x + 30$

$x =$ ____

---

22 Identify the base and the exponent in the following expression.

4^5

4 is the [a] and 5 is the [b]

a
- Exponent
- Base

b
- Exponent
- Base

---

23 What is $411,600,000$ in scientific notation.

$\times 10^8$

a
- 41.16
- 4.116
- 411.6
- 0.4116

---

24 In scientific notation, $8,599,000,000 = 8.599 \times 10^x$. What is the value of x?

a
- 9
- 8
- 7
- 10

---

25 Evaluate :

$9 + (5 \times 10) + 1 - (15 \times 2)$ =

---

26 Solve using the order of operations: $2^2 + (9 - 3) \div 3 + 11$ =

---

27 If a function is defined as $\mathrm{f}(\mathrm{x}) = 2\mathrm{x} + 3$, find the value of $\mathrm{f}(4)$.

$\mathrm{f}(4) =$

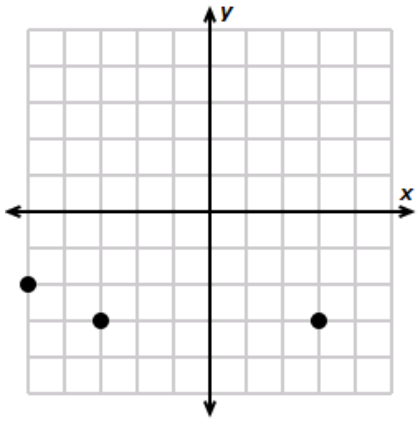
---

28 Graph the following line.

$y = \frac{3}{2}x - 5$

---

29 Look at the data points on the graph:



Is this relation a function?

Answer:

a

- yes
- no

---

30 Graph the equation $y = 2x - 3$

---

31 Find two consecutive even integers whose sum is 54

---

32 Andy is seven years older than his wife Lori. If Andy and Lori's ages add up to fifty-one, how old are Andy and Lori?

---

33 Dan is fourteen years older than Marge. Eight years ago, Dan was three times as old as Marge. Find their present age.

---

34 The perimeter of a rectangle is 24 inches. Find the dimensions if its length is 3 inches greater than its width.

---

35 Solve each equation.

$x - 10 = 4$

---

36 Find the missing exponent. $\frac{5^{11}}{5^{?}} = 5^{4}$ Exponent only in the answer box

---

37 Graph the line below:

$y = -2x + 7$

---

38 Simplify the expression $4x^3 \times 2x^3$

(A) $8x^6$

(B) $8x^9$

(C) $2x^6$

(D) $2x^9$

---

39 Simplify and solve for x.

$5\,(x + 20) = 7x + 30$

$x =$

---

40 Solve for c.

$2\,(c + 1) = 10$

$c =$

41 Simplify. $(7^6)^2$

---

42 The slope of the line that passes through the points $(6, 9)$ and $(11, 2)$ is

(A) $\frac{7}{5}$

(B) $-\frac{7}{5}$

(C) $\frac{5}{7}$

(D) $-\frac{5}{7}$

---

43 Find the square root of each number.

$\sqrt{81} =$

$\sqrt{169} =$

---

44 A scientist measured the wavelength of an X-ray as 0.0000000065 meters.

Write the number in scientific notation.

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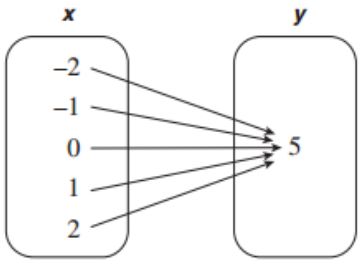
45 Tell whether the relationship shown in the mapping diagram is a function or not.



Answer:

a

- yes
- no

---

46 Complete the table below for the function $y = 3x$.

x	y
0	0
1	1
2	2
3	3

---

47 Consider the function: $y = 2x + 5$
What will be the value of the function when $x = 10$?

(A) 25

(B) 24

(C) 23

(D) 22

---

48 Stefanie bought a package of pencils for $\$1.75$ and some erasers that cost $\$0.25$ each. She paid a total of $\$4.25$ for these items, before tax.
Exactly how many erasers did Stefanie buy?
Enter your answer in the box.

---

49 Solve the following equation.

$$\frac{m}{3} + 8 = 15$$

---

50 Which of the input-output tables represent a function?
Select **each** correct answer.

A

Input	Output
1	4
1	6
5	5
8	10

B

Input	Output
1	4
5	6
5	1
10	8

C

Input	Output
1	4
8	6
5	1
10	5

D

Input	Output
1	4
10	6
5	5
8	1

E

Input	Output
1	4
8	6
5	10
1	5

51 Which of the following expressions is 7a - 3(2a - 4) in simplest form?

(A) a - 12

(B) a + 12

(C) 13a - 12

(D) 13a + 12

---

52 Evaluate $\frac{4r}{s}$ if $r = 9$ and $s = 2$

(A) 24.5

(B) 36

(C) 72

(D) 18

---

53 $(-6x - 11) - (-2x - 4)$

---

54 331 students went on a 7th grade field trip. Six buses were filled and 7 students had to travel in cars. How many students were on each bus? (Define the variable and pick the correct equation)

(A) b = buses; 6b + 7 = 331

(B) s = students on buses; 6b + 7 =331

(C) s = students in cars; 6b + 7 = 331

(D) s = students on trip; 331 - 7 = 6b

---

55 What is the greatest common factor of 24 and 40?

(A) 8

(B) 20

(C) 16

(D) 14

---

56 What value of x makes the equation $3(x-6)-8x = {}^{-}2+5(2x+1)$ true?

Enter your answer in the box.

---

57 Determine whether the equation has no solution, one solution, or infinitely many solutions.

${}^{-}2(11-12x) = {}^{-}4(1-6x)$

Show each step of your work. Explain your conclusion.

Enter your answer, your work, and your explanation in the box provided.

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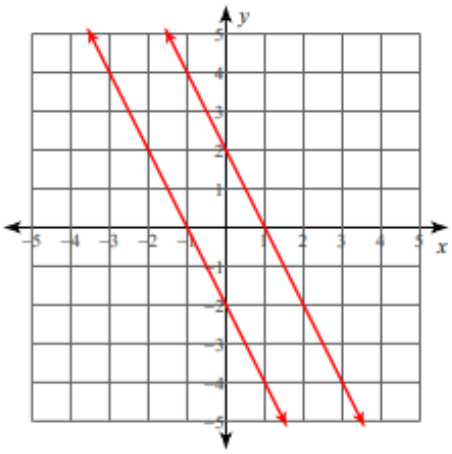
58 What is the solution to the systems of equations below?



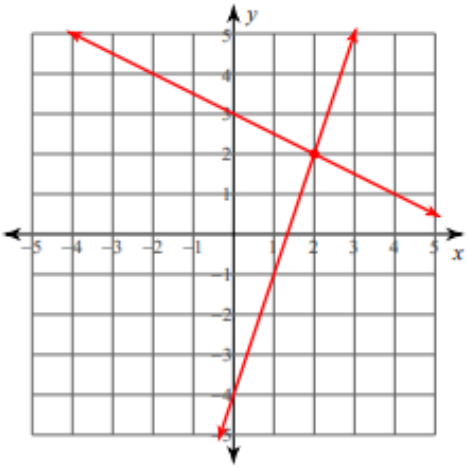
(A) *Infinite Solutions*

(B) *No Solutions*

(C) *Two Solutions*

(D) *One Solution*

59 What is the solution to the systems of equations below?



(A) (2, 2)

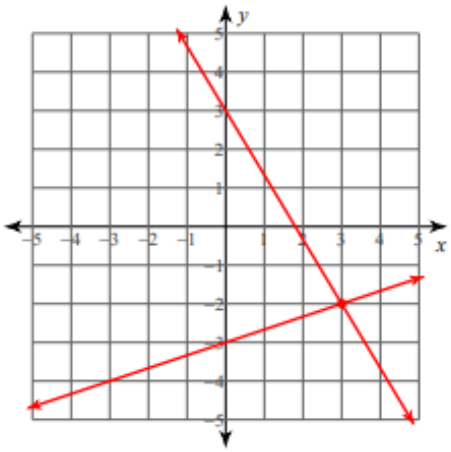
(B) (-2, -2)

(C) (-2, 2)

(D) (2, -2)

---

60 What is the solution to the systems of equations below?



(A) (-2, 3)

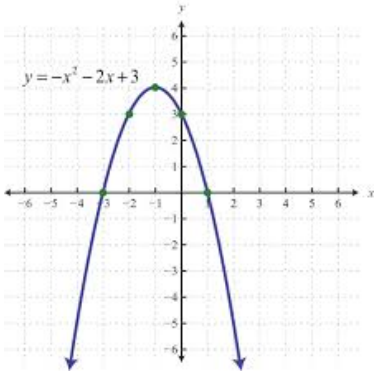
(B) (3, -2)

(C) (3, 2)

(D) (-3, -2)

61 Which of these is a linear function?

A



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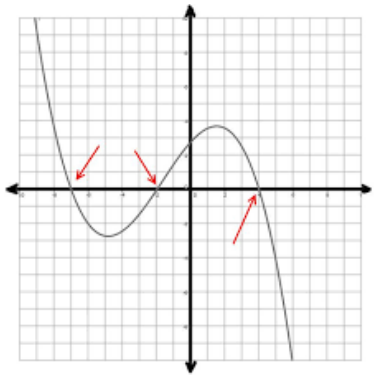

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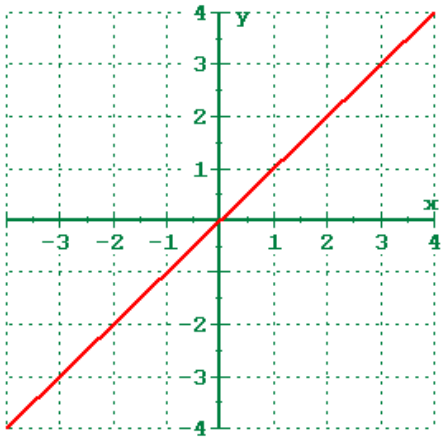

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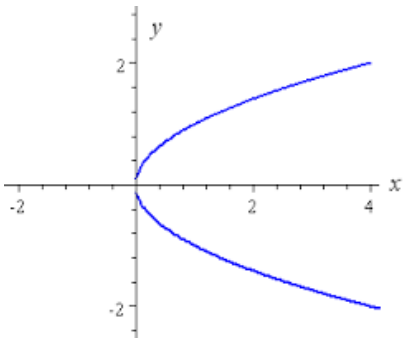


62 Which statement describes the solution(s) to the system of equations $-6x - 3y = 12$ and $-12x - 6y = -24$?

(A) The system has no solution.

(B) The system has a solution of $(-2, -1)$.

(C) The system has a solution of $(3, -2)$.

(D) The system has infinitely many solutions.

---

63 Solve the equation $3(x - 2) + 2(x + 1) = -14$

(A) $x = -2$

(B) $x = 2$

(C) $x = 8$

(D) $x = 14$

---

64 Andre has $\$44$. He must save **at least** $\$120$ plus 7% sales tax to buy an electronic tablet. If he saves half the $\$15$ he makes each week, after how many weeks will he have enough money to buy the tablet?

(A) 5 weeks

(B) 6 weeks

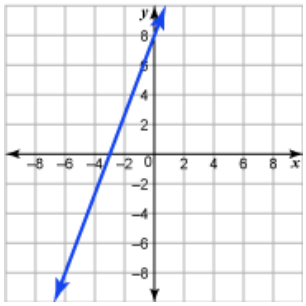
(C) 11 weeks

(D) 12 weeks

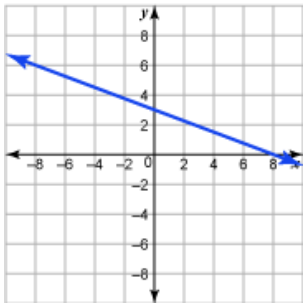
---

65 A line has an x-intercept of $(3, 0)$ and a y -intercept of $(0, 8)$. Select the correct graph of the line.

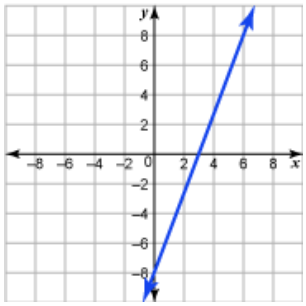
A



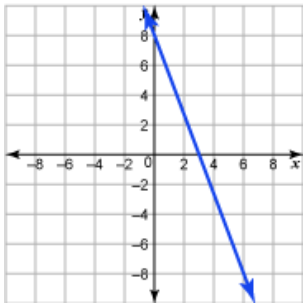
B



C



D



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66 Solve the system of equations without graphing. Explain or show your reasoning.

(a) $\begin{cases} y = -2x + 1 \\ 4x + y = 9 \end{cases}$

Explain your reasoning:

(b)

---

67 A store creates a mixture using only peanuts and almonds.

- There are 20 pounds of the mixture.
- Peanuts cost $\$2.95$ per pound.
- Almonds cost $\$5.95$ per pound.
- The mixture costs $\$4.00$ per pound.

How many pounds of peanuts are in the mixture?

(A) 2

(B) 6

(C) 7

(D) 13

---

68 A college student completed some courses worth 3 credits and some courses worth 4 credits. The student earned a total of 59 credits after completing 18 courses.

How many courses worth 3 credits did the student complete?

(A) 13

(B) 5

(C) 20

(D) 39

---

69 What is the solution to the system below?

$$\begin{cases} y = -2x + 8 \\ 4x - 2y = 8 \end{cases}$$

(A) Infinite Solutions

(B) (4, 0)

(C) (-3, 14)

(D) (3, 2)

---

70 Solve the equation:

(a) $\frac{3x-2}{4} = 2x - 8$

$x =$ ____

Explain your reasoning / show work:

(b)

---

71 What value of x makes this equation true?

$\frac{x}{3} - 3 = \frac{x}{9} + 3$

(A) 3

(B) -9

(C) -1

(D) 27

---

72 Find the product of $(2x+3)(3x-2)$

(A) $6x^2+5x-6$

(B) $6x^2+9x-5$

(C) $6x^2+9x-6$

(D) $6x^2+5x-5$

---

73 What are the solutions to the equation $x^2+9=0$?

$x =$ ____

---

74 An equation is shown.

$2x^2-5x-3=0$

What values of x make the equation true?

x = ____

x = ____

---

75 Simplify the expression: $\dfrac{-12x^{10}y^3}{6x^8y}$

(A) $-6x^2y^2$

(B) $6x^2y^2$

(C) $-2x^2y^3$

(D) $-2x^2y^2$

---

76 Solve the equation using square roots.

$x^2-81=0$

(A) 81,-81

(B) 9,-9

(C) 3,-3

(D) No real number solutions

---

77 An equation is shown.

$16x^2 + 10x - 27 = -6x + 5$

What are the solutions to this equation ?

$x =$ ☐

$x =$ ☐

---

78 Solve: $-3x - 7 \leq 11$

(A) $x \geq -2$

(B) $x \leq -\frac{1}{2}$

(C) $x \leq -2$

(D) $x \geq -6$

---

79 What is the solution to the following system of equations:
$7x + 2y = 24$
$8x + 2y = 30$

(A) $(6, -9)$

(B) $(5, -1)$

(C) $(-6, 4)$

(D) Infinitely Many

---

80 For the equation below:
$2x^2 - 12x + 18 = 0$

(a)

Part A

Find the discriminant of the quadratic equation.

☐

Part B

How many real solutions does the quadratic equation have?

(b)

(A) Two Real Solutions

(B) One Real Solution

(C) No Real Solutions

---

81 What is the vertex of the following quadratic?

$x^2 + 10x + 28$

(A) (5,103)

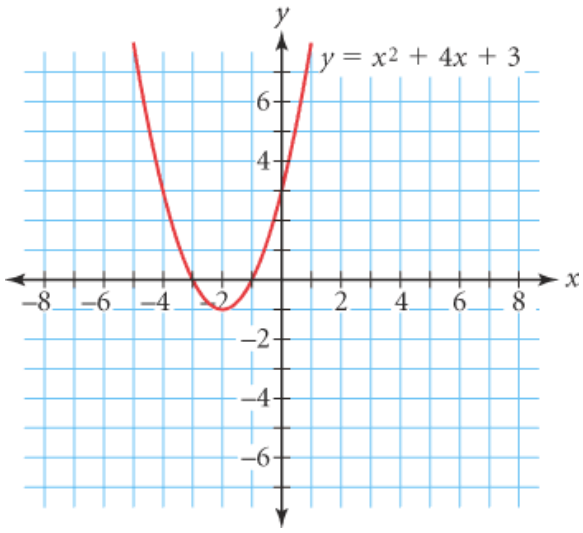
(B) (-5,3)

(C) (-5,-47)

(D) (-10,28)

---

82 Use the graph to answer the following questions



(-3,0) is a **a**

(-2, -1) is a **b**

(-1, 0) is a **c**

The parabola has a **d**

a
- solution
- vertex

b
- vertex
- solution

c
- vertex
- solution

d
- maximum
- minimum

---

83 Simplify the expression: $-6x^2(3x^5)$

(A) $-18x^7$

(B) $-3x^7$

(C) $-18x^{10}$

(D) $-3x^{10}$

---

84 How many solutions would there be for the following system of equations?

$y = 3x - 5$

$6x - 2y = 10$

(A) 1 Solution

(B) 2 Solutions

(C) No solution

(D) Infinitely Many solutions

---

85 Find the roots of $f(x) = x^2 + 10x - 96$.

(A) $x = 8$ *or* $x = -12$

(B) $x = 6$ *or* $x = -16$

(C) $x = -4$ *or* $x = 24$

(D) $x = 8$ *or* $x = 12$

---

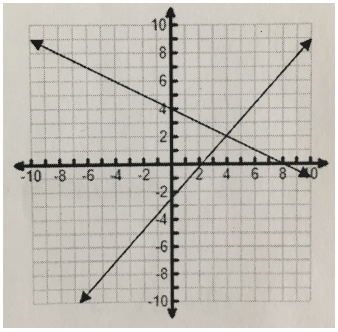
86 Use the distance formula below to answer the question:

Distance Formula

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

What is the distance between (7, -2) and (3,1)?

87 What is the solution to the system of linear equations graphed here?



(A) (0,4)

(B) (4,2)

(C) (2,4)

(D) No Solution

---

88 Simplify the expression: $(-6x)^0$

(A) 0

(B) 1

(C) -6x

(D) -6

---

89 Solve the equation by factoring: $x^2 + 5x - 20 = 4$

(A) $x = -8,\ c = 3$

(B) $x = 8,\ x = -3$

(C) $x = -8,\ x = -3$

(D) $x = 8,\ x = 3$

---

90 Select the solutions to this quadratic equation:

$x^2 - 6x + 8 = 0$

A x = 2

B x = 4

C x = 0

D x = -2

E x = 1

F x = -4

---

91 *Use the two points below to answer the following.*

(a) $(-2, 11)$ & $(5, 6)$

What is the slope of the equation between these two points?

A $m = \frac{7}{5}$

B $m = \frac{-5}{7}$

C $m = \frac{17}{3}$

D $m = \frac{3}{17}$

(b)

How would you classify the slope?

a

a

- Negative
- Positive
- The slope is zero.
- The slope is undefined.

---

92 Simplify the Expression: $(2x^5y^2)^3$

(A) $2x^{15}y^6$

(B) $8x^{15}y^6$

(C) $8x^8y^5$

(D) $6x^{15}y^6$

---

93 What is the equation of a line that has a slope of 2, and contains the point (4,6)?

(A) $y-6=2(x-4)$

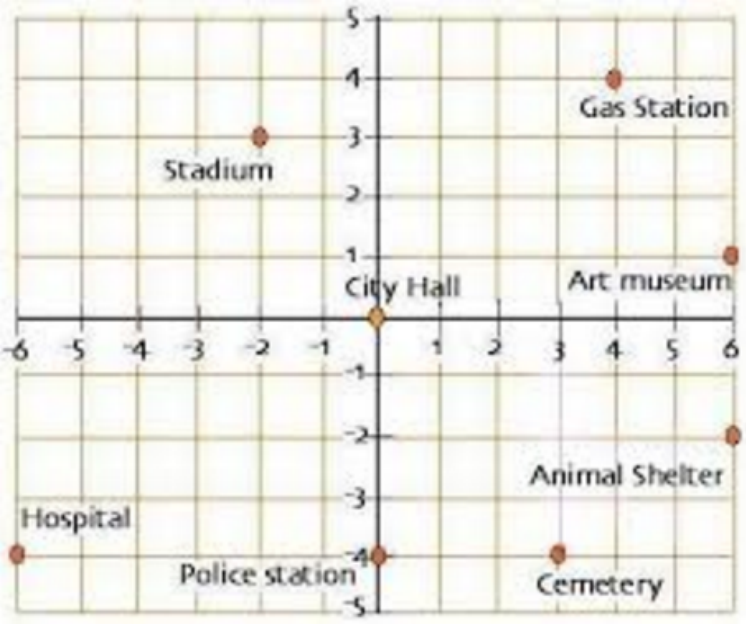
(B) $y+6=2(x+4)$

(C) $y-4=2(x-6)$

(D) $y-2=6(x-4)$

---

94 The coordinate plane below shows locations of items in a town.



What is the midpoint between the animal shelter and stadium?

$$\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$$

(____ , ____)

95 Find the slope:

$(-4, 7), (-6, -4)$

(A) $\frac{11}{2}$

(B) $\frac{-11}{2}$

(C) $\frac{-11}{10}$

(D) $\frac{11}{10}$

---

96 Solve the following formula for *l*.

$P = 2(w + l)$

(A) $2P - w$

(B) $2P + w$

(C) $\frac{P}{2} + w$

(D) $\frac{P}{2} - w$

---

97 Evaluate the expression when $b = -2$ and $t = 4$.

$\frac{(6 + b)^2}{2t - 6}$

(A) 11

(B) 8

(C) 32

(D) 10

---

98 Which of the following systems of equations has no solution?

(A) $\begin{cases} y = 7x + 4 \\ y = \frac{-1}{7}x + 4 \end{cases}$

(B) $\begin{cases} y = 2x + 5 \\ y = 2x + 5 \end{cases}$

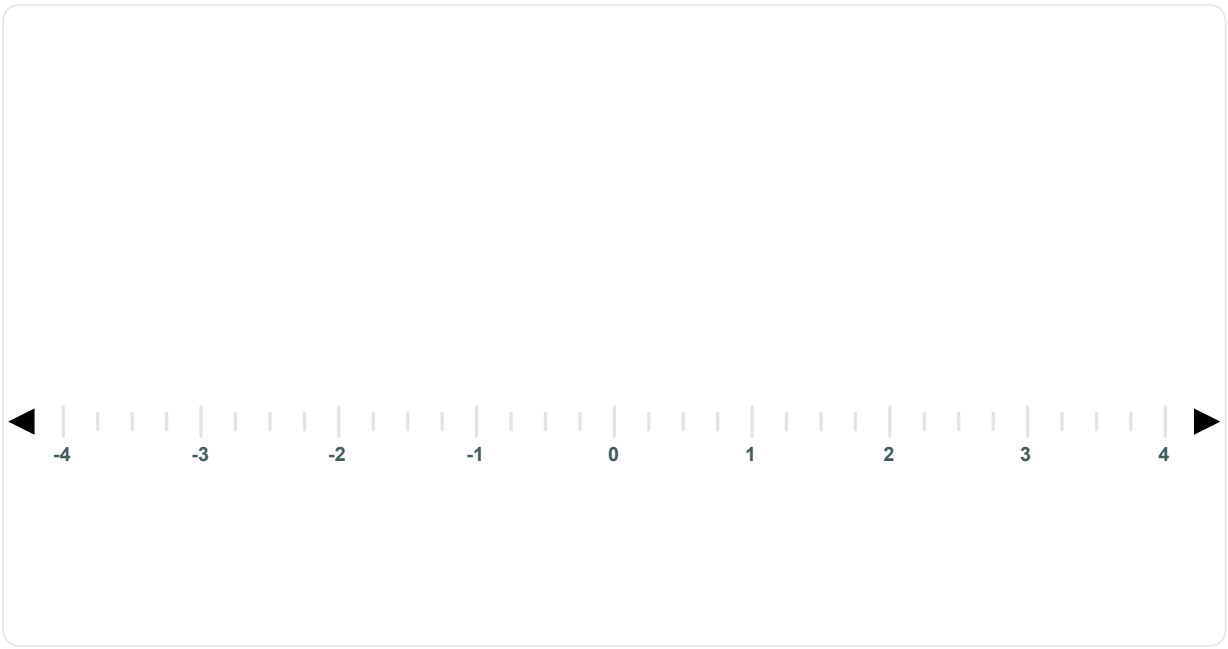
(C) $\begin{cases} y = \frac{3}{2}x - 2 \\ y = \frac{3}{2}x - 4 \end{cases}$

(D) $\begin{cases} y = 9x + 4 \\ y = -x \end{cases}$

---

99 Solve the compound inequality. Graph the solution set.

$3t + 2 \leq -7$ or $-4t + 5 < 1$



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100 **A rectangle has a length of 12 meters and a width of 400 centimeters. What is the perimeter, in cm, of the rectangle?**

(A) 824

(B) $1,600$

(C) $2,000$

(D) $3,200$

---

101 ***Parallel Lines***

Part A

(a)

What is the slope of a line Parallel to y = -7x + 5

(A) $\frac{1}{7}$

(B) $-\frac{1}{7}$

(C) 7

(D) -7

(b)

Part B

Write the equation of the line Parallel to y = -7x + 5 that goes through the point (-1, -5).

y = ☐ ***x +*** ☐

---

102 Graph the solution to the following inequality.

$-2y + 3 < 5$

---

103 ***Write the equation of the line through the points: (2, -5) & (0,-2)***

Part A

(a)

In Point-Slope Form:

(A) y - 2 = $\frac{2}{3}$ (x + 5)

(B) y + 5 = $\frac{-3}{2}$ (x - 2)

(C) y + 2 = $\frac{3}{2}$ (x - 5)

(D) y - 5 = $\frac{-2}{3}$ (x + 2)

(b)

Part B

In Slope-Intercept Form: (HINT: type your point-slope equation into Desmos, identify your slope (m) and y-intercept (b), and plug them into y=mx+b)

y = _____ x + _____

---

104 Bamboo plants can grow 91 centimeters per day. What is the approximate growth of the plant, in inches per hour?

(A) 1.49

(B) 3.79

(C) 9.63

(D) 35.83

---

105 What is the equation of a line that has a slope of 2, and contains the point (4,6)?

(A) $y - 6 = 2(x - 4)$

(B) $y + 6 = 2(x + 4)$

(C) $y - 4 = 2(x - 6)$

(D) $y - 2 = 6(x - 4)$

---

106 Solve the following equation for the given variable.

$$-2(3y - 6) + 4(5y - 8) = 92$$

(A) $y = -8$

(B) $y = 6$

(C) $y = -6$

(D) $y = 8$

107

Solve the system using any method.

$$\begin{cases} 2x + y = 7 \\ 4x + 6y = 10 \end{cases}$$

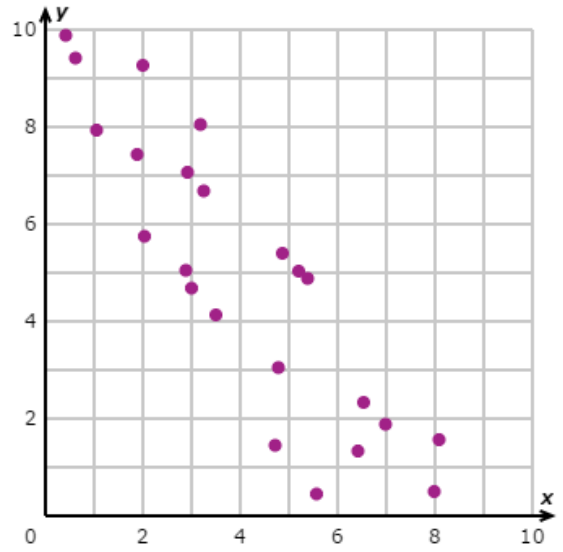
x =

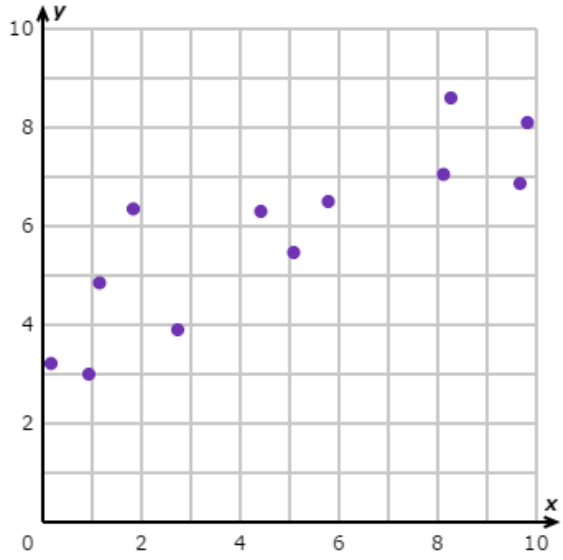
y =

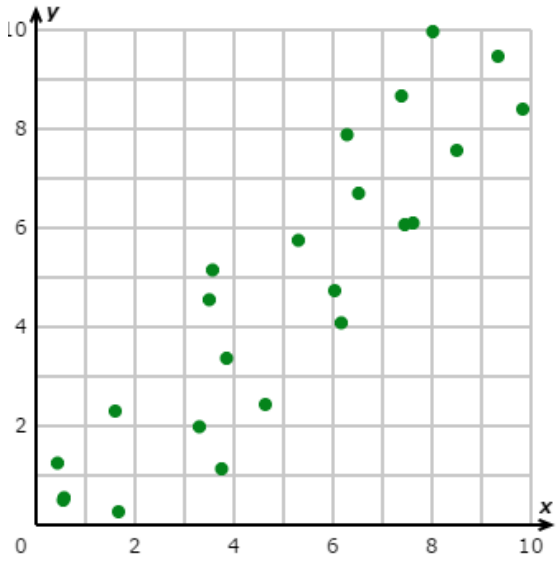
108

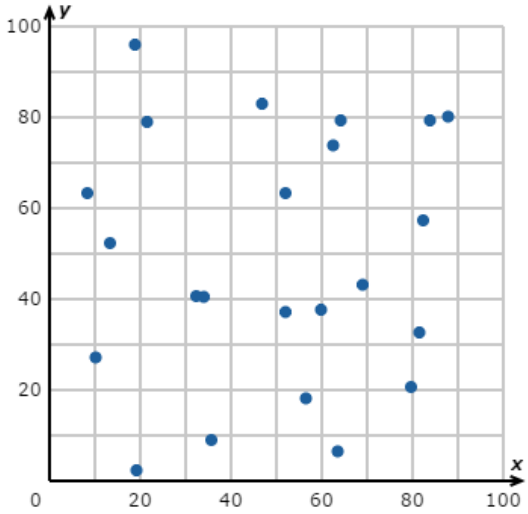
Determine the type of correlation which the following scatter plots follows and classify them under their respective column headings.

DRAG & DROP THE ANSWER







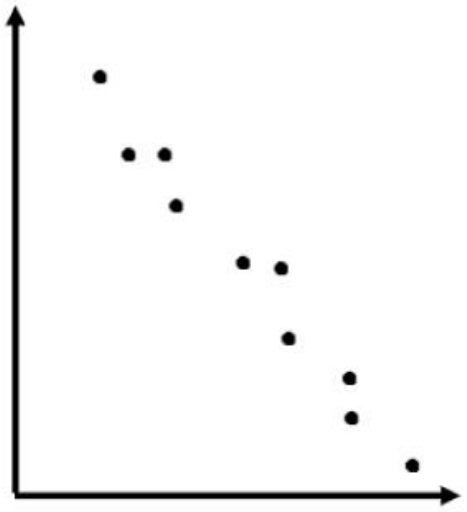


Positive correlation

Negative correlation

No correlation

109 Describe the association represented in the graph.



(A) strong, positive.

(B) strong, negative.

(C) weak, negative.

(D) no association.

---

110 Which polynomial has a leading coefficient of 4 and a degree of 3?

(A) $3x^4 - 2x^2 + 4x - 7$

(B) $4 + x - 4x^2 + 5x^3$

(C) $4x^4 - 3x^3 + 2x^2$

(D) $2x + x^2 + 4x^3$

---

111 What is the leading coefficient of the following:

$14x^2 - 7x - 11$

---

112 Classify the parts of the expression $4a^5$ as either the coefficient, variable, or exponent.

variable	
exponent	
coefficient	

DRAG & DROP THE ANSWER

a | 4 | 5

---

113 Which type of polynomial is the following:
$-3x - 5 + 7y$

(A) monomial

(B) trinomial

(C) binomial

---

114 What is the degree of the following polynomial?

$13x^3y^4$

---

115 Put the following polynomial into standard form:

$11 + 7x - 14x^2 + x^5$

---

116 Determine which type of polynomial the following are:

$6x - 9y^3z^2$

(A) binomial

(B) trinomial

(C) monomial

---

117 Students were asked to write $6x^5 + 8x^3 + x^3 + 7x + 7$ in standard form. Shown below are four student responses.

Anne: $7x^7 + 6x^5 - 3x3 + 8x$
Bob: $-3x^3 + 6x^5 + 7x^7 + 8x$
Carrie: $8x + 7x^7 + 6x^5 - 3x^3$
Dylan: $8x - 3x^3 + 6x^5 + 7x^7$

Which student is correct?

(A) Anne

(B) Bob

(C) Carrie

(D) Dylan

---

118 What are the minimum, first quartile, median, third quartile, and maximum for the data set?
$18,\ 20,\ 11,\ 10,\ 8,\ 6,\ 12,\ 4$
Round to the tenth if necessary

Minimum [a]
First Quartile [b]
Median [c]
Third Quartile [d]
Maximum [e]

a
- 4
- 6

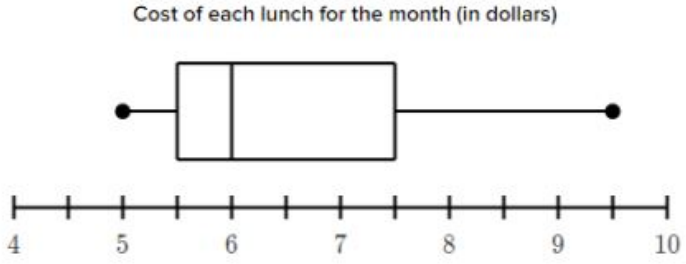
b
- 7
- 8.75
- 5.5

c
- 10.5
- 12.75

d
- 15
- 17.5

e
- 20
- 18

119 Use the box plot below to fill in the blanks to the five-number summary below.



Minimum: _____

Maximum: _____

Median: _____

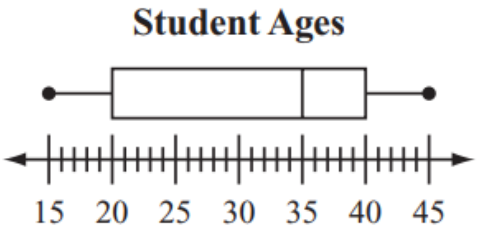
First Quartile: _____

Third Quartile: _____

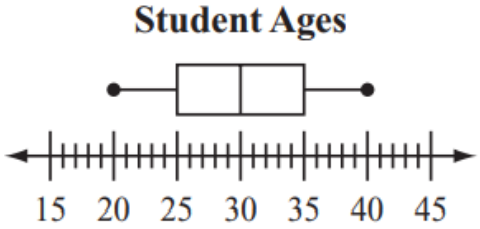
---

120 In a community college class, the interquartile range of student ages is 20 years, and the median student age is 30 years. Which of the following box-and-whisker plots could represent the distribution of the ages of the students in the class?

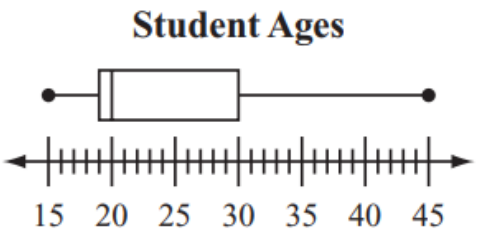
(A)



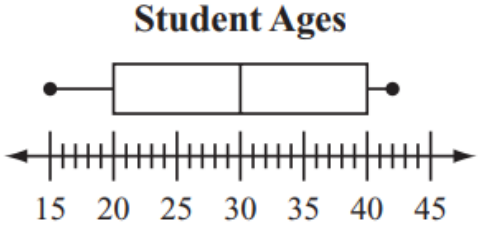
(B)



(C)

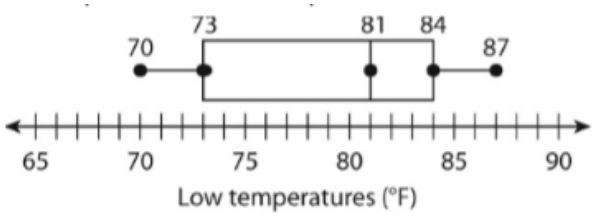


(D)



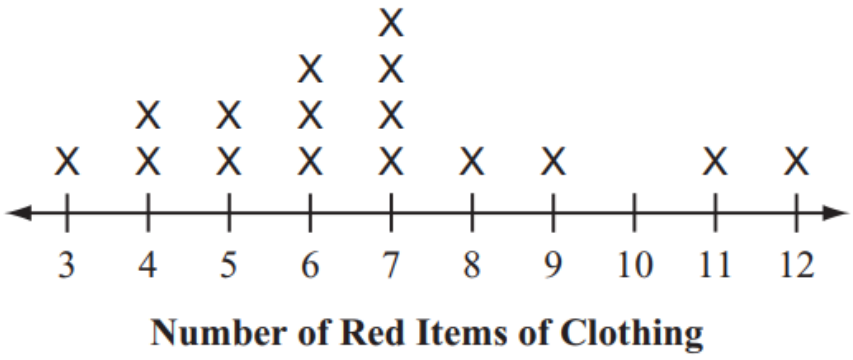
---

121 Use the box and whisker plot to answer the following question.



What is the interquartile range of the data set?

122 The line plot below shows the number of red items of clothing owned by each student in a class.



What is the median number of red items of clothing owned by the students in the class?

123 The following histogram represents the marks of students in the mid term examination. The y-axis represents the number of students who scored the marks represented on the x-axis. Determine the range of marks that contains the fewest number of students.

DRAG & DROP THE ANSWER

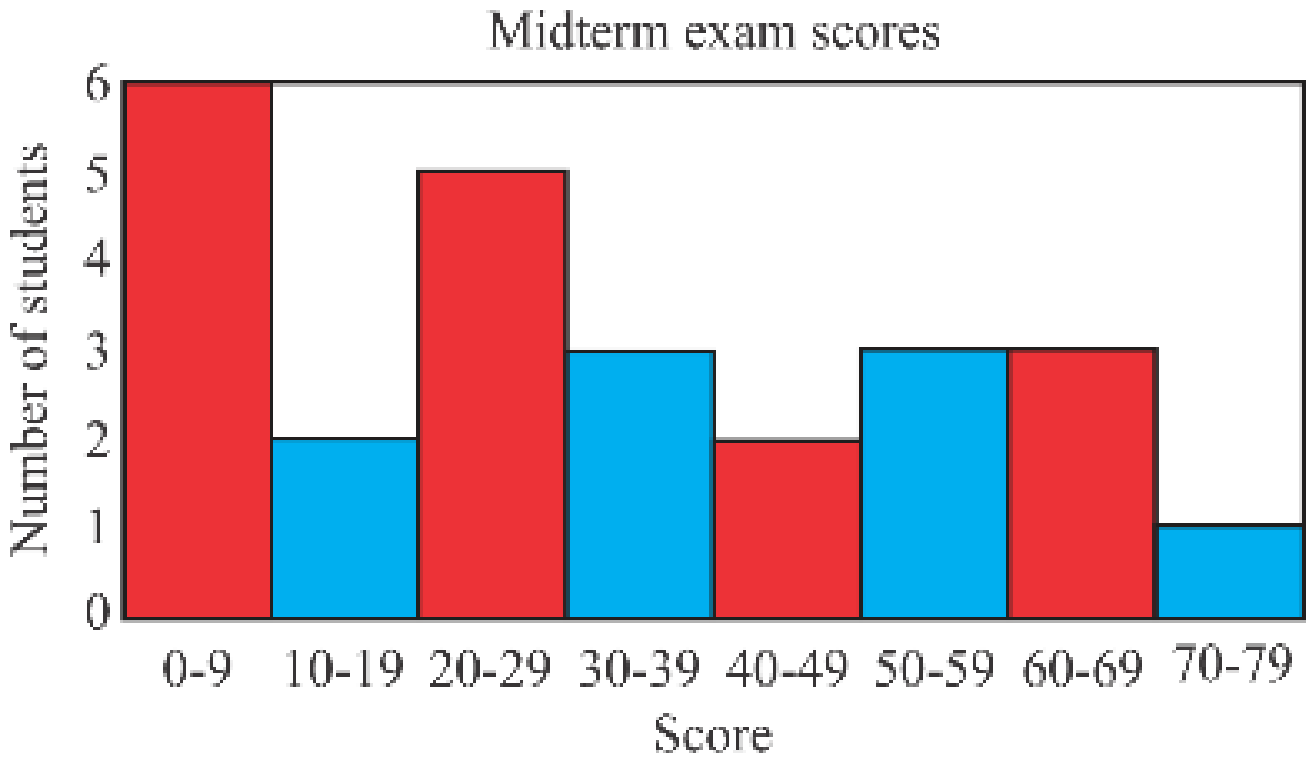
$60 - 69$

$10 - 19$

$20 - 29$

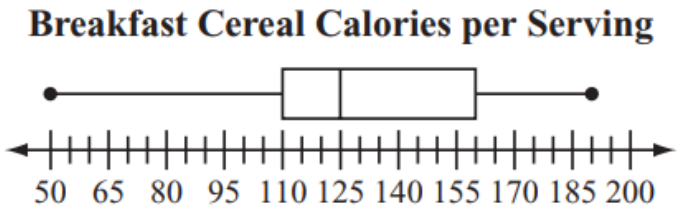
$70 - 79$

Note: Use CTRL+D to drag the option via keyboard



Range:

124 The box-and-whisker plot below shows the distribution of the numbers of calories per serving for a selection of breakfast cereals.



Based on the box-and-whisker plot, what is the median number of calories per serving for the breakfast cereals?

(A) 110

(B) 120

(C) 125

(D) 135

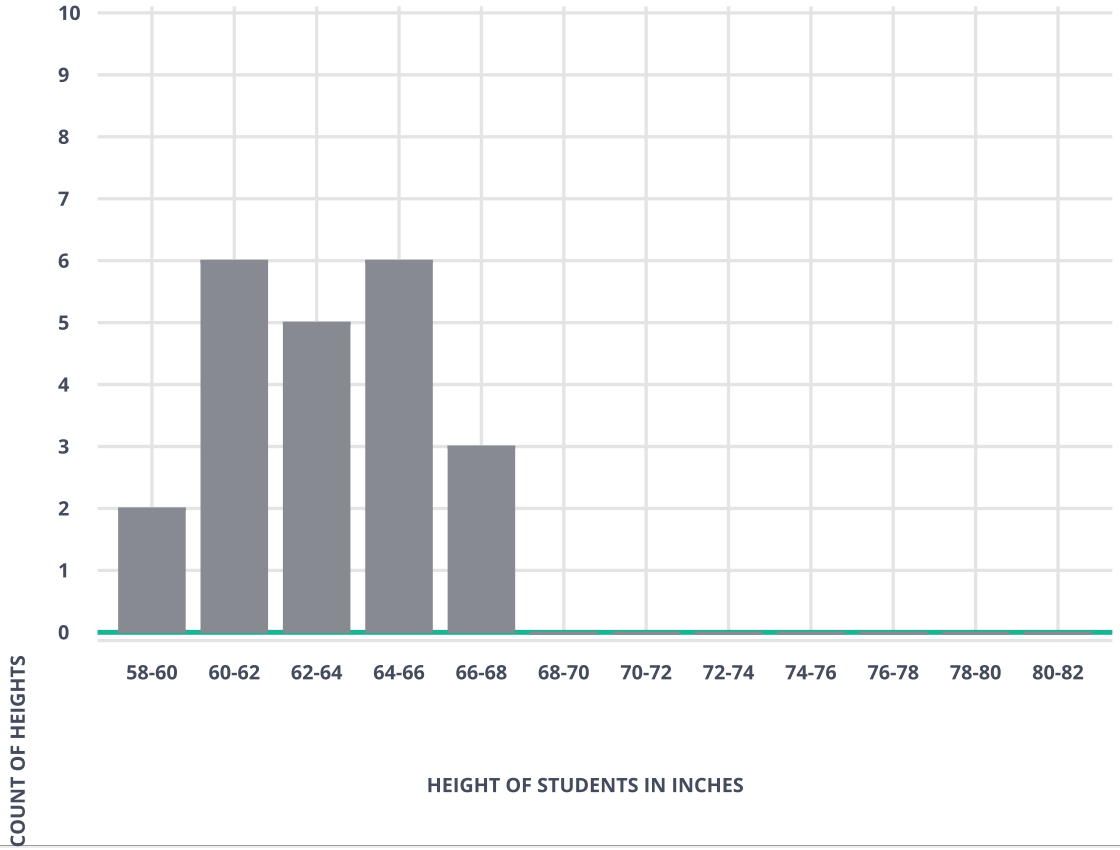
125

Diego arranges the students in his math class from shortest to tallest and measures the height in inches of each student in the class. The heights of the 22 shortest students are summarized in the histogram. The tallest 8 students have their heights recorded here.

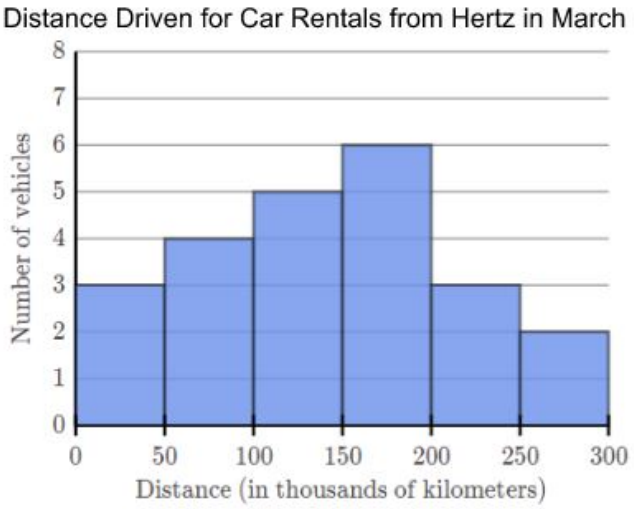
73 73 73 75 75 77 79 81

Complete the histogram using the data for the tallest 8 students in the class.

Reset



126 Use the following histogram below to answer the following questions in Parts A-D below.



Part A:
How many vehicles were rented from Hertz in March?
[ ] vehicles

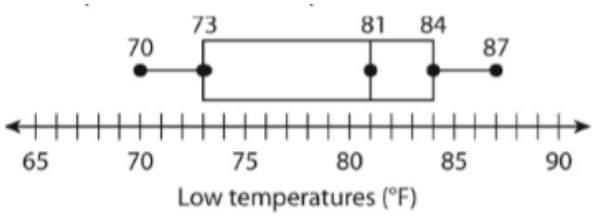
Part B:
How many more vehicles were driven between 50 and 100 thousand kilometers than between 250 and 300 thousand kilometers?
[ ] vehicles

Part C:
How many vehicles were driven less than 200 thousand kilometers?
[ ] vehicles

Part D:
How many vehicles were driven at least 200 thousand kilometers
[ ] vehicles

---

127 Use the box and whisker plot to answer the following question.



What is the **interquartile range IQR** of the data set? (IQR = Q3 - Q1)
[ ]

---

128 The chess club at a school has 15 members. The number of games won in tournament play this season by each member is listed.

(a)

6 6 6 7 10 11 12 13 14 14 15 16 18 18 30

What measure of center is most appropriate to use to describe a typical value for the data in this distribution?

(A) Mean

(B) Median

(C) Both

(b)

Explain your reasoning.

(c)

What measure is most appropriate for describing variability in this data distribution?

(A) Standard Deviation

(B) Interquartile Range

(C) Both

---

129 The number of absences for each student in Mr. Lee's class is $1,\ 1,\ 0,\ 5,\ 0,\ 20,\ 0,\ 3,\ 0,\ 2,\ 2,\ 2,\ 1,\ 1$ and is represented by one of the figures below.

Figure 1

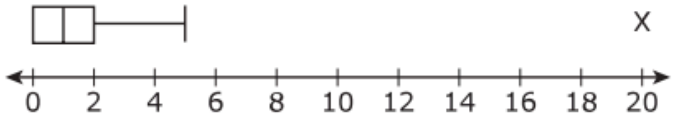


Figure 2

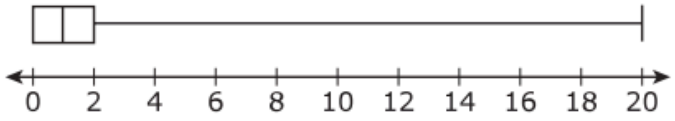


Figure 3

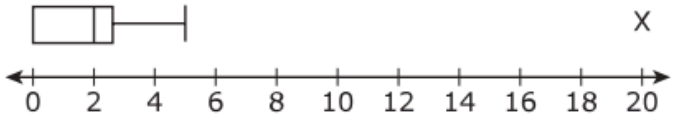
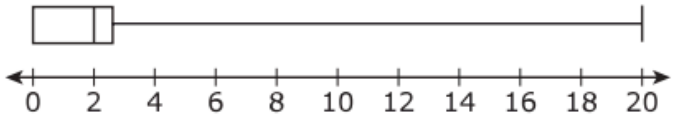


Figure 4



Select the answers that **best** complete the sentence. The data in the table is best represented by a , and b represents the center of the data.

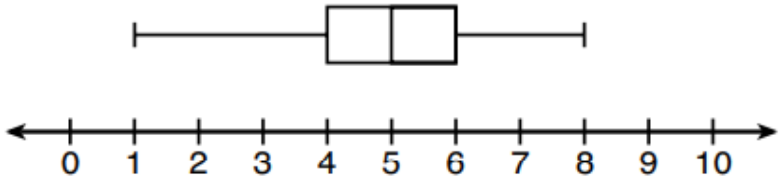
a

- Figure 1
- Figure 2
- Figure 3
- Figure 4

b

- 0
- 1
- 2
- 5

130 What is the range of the box plot shown below?



(A) 7

(B) 2

(C) 3

(D) 4

---

131 **A reading teacher recorded the number of pages read in an hour by each of her students. The numbers are shown below.**

$$44, 49, 39, 43, 50, 44, 45, 49, 51$$

For this data, which summary statistic is NOT correct?

(A) The minimum is 39.

(B) The lower quartile is 44.

(C) The median is 45.

(D) The maximum is 51.

---

132 A coach recorded the number of goals scored by a soccer team in each of its last ten games. The data are shown.

3, 2, 10, 2, 1, 5, 3, 2, 1, 5

A. What are the first quartile, the median, and the third quartile of the data? Be sure to label each one.

B. What is the interquartile range of the data? Show or explain how you got your answer.

C. The value 10 in the data is an outlier. Explain how this outlier affects the distribution of the data.

D. If the value 10 in the data is replaced by the mode, by how much will the mean change? Show or explain how you got your answer.

133 Simplify the expression below.

$(12s^4 - 6s^2 + 4s) + (6s^4 - 4s + 27) - (4s^4 + s^2 + 12)$

---

134 Multiply & simplify completely $(2x + 1)(x^2 - 4x + 5)$.

(A) $2x^3 - 7x^2 + 6x + 5$

(B) $2x^3 - 9x^2 + 6x + 5$

(C) $2x^3 - 7x^2 + 14x + 5$

(D) $2x^3 - 9x^2 + 14x + 5$

135

Part A

Create an expression that represents the perimeter of the rectangle above.
Write the expression as a polynomial in standard form.

Perimeter =

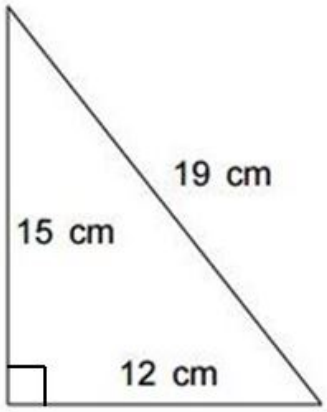
Part B

Create an expression that represents the area of the rectangle above.
Write the expression as a polynomial in standard form.

Area =

---

136 Find the area of the triangle given below and type your result in the empty box.



Answer: cm^2

---

137 Find the area of a triangle with base of 10 inches and a height of 5 inches.

(A) 100 square inches

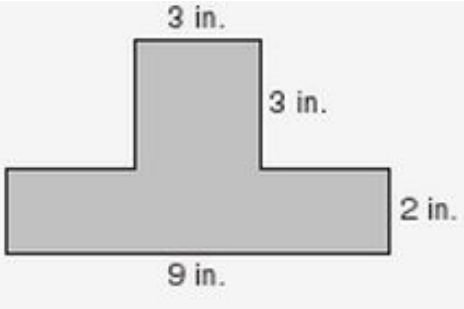
(B) 50 square inches

(C) 25 square inches

(D) 12.5 square inches

---

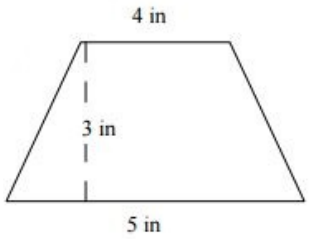
138 Find the area of the figure.



Answer: in^2

---

139 Find the area of the trapezoid shown below and choose the appropriate result.



(A) $13\ \text{in}^2$

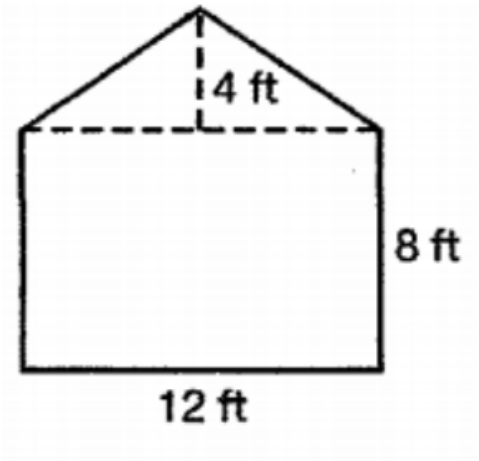
(B) $13.5\ \text{in}^2$

(C) $15\ \text{in}^2$

(D) $27\ \text{in}^2$

---

140 Find the area of the irregular polygon.



(A) $80\ \text{in}^2$

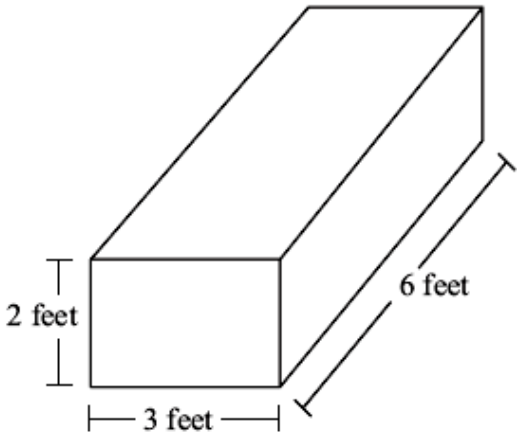
(B) $96\ \text{in}^2$

(C) $120\ \text{in}^2$

(D) $154\ \text{in}^2$

---

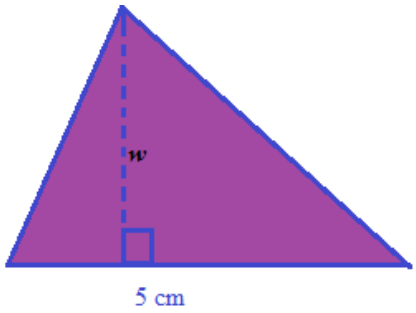
141 Find the volume of rectangular prism.
Type your result in empty box provided.



Answer: cubic feet.

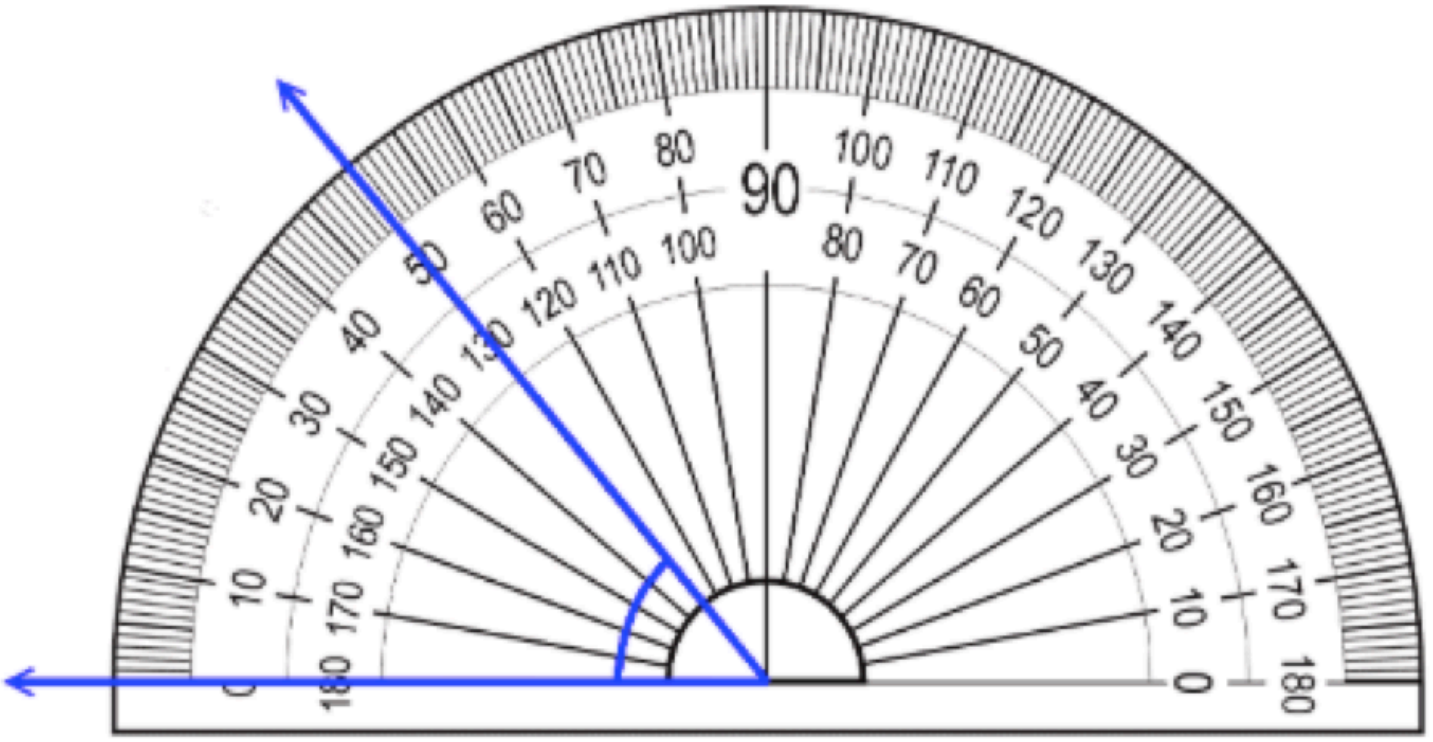
---

142 If the area of the triangle is 10 cm ^{2}, what is the missing height?



w = cm

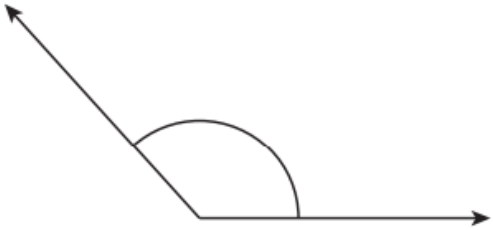
143



Ms. M is measuring an angle with a protractor. What is the measurement of the angle?

---

144 Which angle is shown?



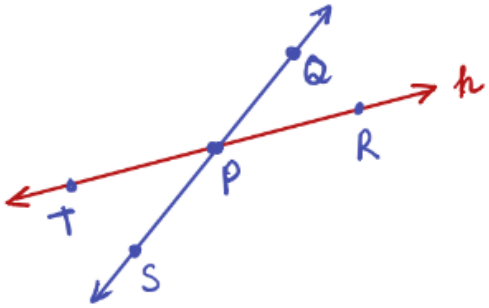
(A) right angle

(B) acute angle

(C) obtuse angle

(D) straight angle

145



TRUE or FALSE?
Point S, point P and point Q are collinear.

(A) True

(B) False