

Name _____

Mrs. Roubos

Date _____

8R Period _____

Take Home Quiz #12
Show all work where possible!

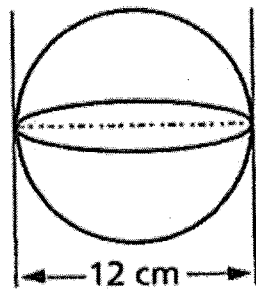
Due: _____

Sphere: $V = \frac{4}{3}\pi r^3$

Cylinder: $V = \pi r^2 h$

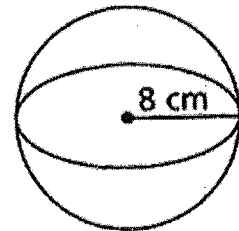
Cone: $V = \frac{1}{3}\pi r^2 h$

1) What is the volume of this sphere? (Use 3.14 for π .)



- a. 25.12 cm^3 b. 904.32 cm^3
c. 150.72 cm^3 d. $7,234.56 \text{ cm}^3$

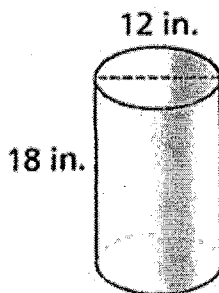
3) The sphere below has a radius of 8 cm.



What is the volume of the sphere? Round your answer to the nearest tenth. (Use 3.14 for π .)

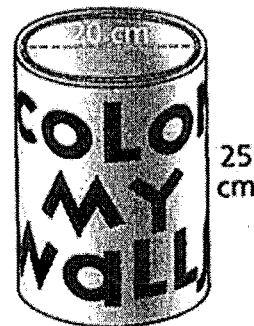
Answer: _____

2) A wastepaper basket has a diameter of 12 inches and a height of 18 inches. Which expression equals the volume of the wastepaper basket?



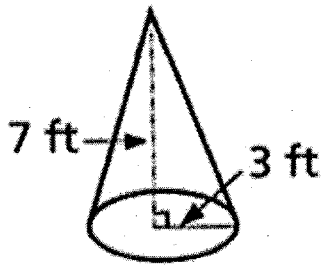
- a. $\pi \cdot 6^2 \cdot 18$ b. $\pi \cdot 12^2 \cdot 18$
c. $\pi \cdot 6 \cdot 18^2$ d. $\pi \cdot 12 \cdot 18^2$

4) A large can of paint has a diameter of 20 cm and a height of 25 cm. Which expression equals the volume of this can?



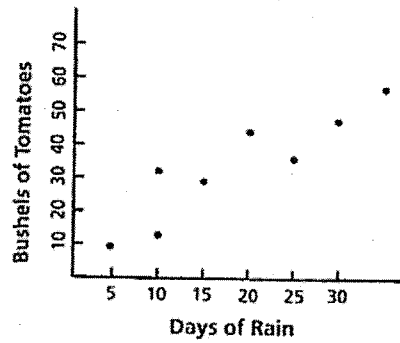
- a. $\pi \cdot 10^2 \cdot 25$ b. $\pi \cdot 20^2 \cdot 25$
c. $\pi \cdot 10 \cdot 25^2$ d. $\pi \cdot 20 \cdot 25^2$

5) What is the volume of this cone? (Use 3.14 for π .)



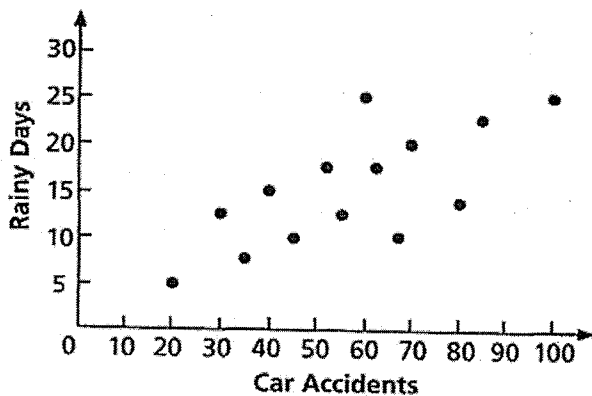
- a. 43.96 cm^3 b. 65.94 cm^3
 c. 131.88 cm^3 d. 197.82 cm^3

7) Which best describes the correlation in the scatterplot below?



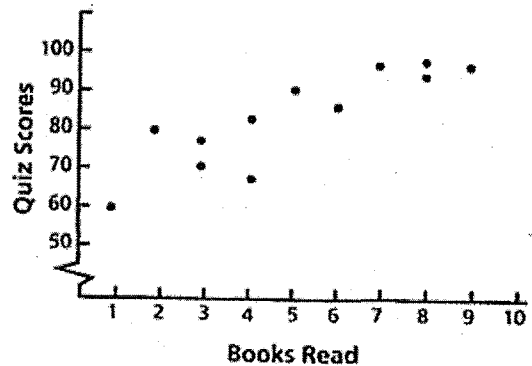
- a. Strong positive. b. Strong negative.
 c. Weak negative. d. None.

6) The scatterplot below compares the number of car accidents in a month to the number of days of rain that month. What happens to the number of accidents as the number of rainy days increases?



- a. There is no obvious pattern.
 b. There are more accidents.
 c. There are fewer accidents.
 d. There are no accidents at all.

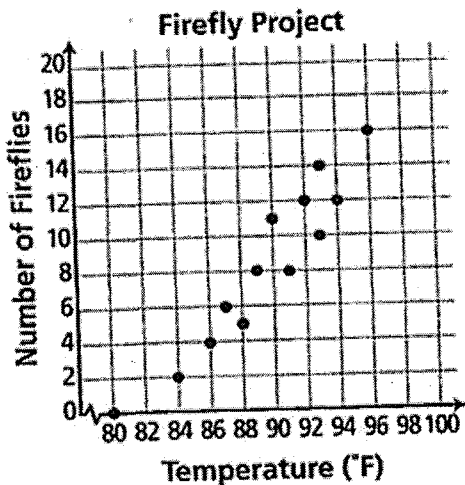
8) Ms. Fletcher gave her students a vocabulary quiz at the beginning of the year. Then she polled her students asking how many books they had read over the summer. Ms. Fletcher recorded the data in the scatterplot below.



Which describes the relationship between books read over the summer and the vocabulary quiz scores?

- a. The more books read, the higher the quiz score.
 b. The fewer books read, the higher the quiz score.
 c. The number of books read equals the quiz score.
 d. There's no relationship between the number of books read and a student's quiz score.

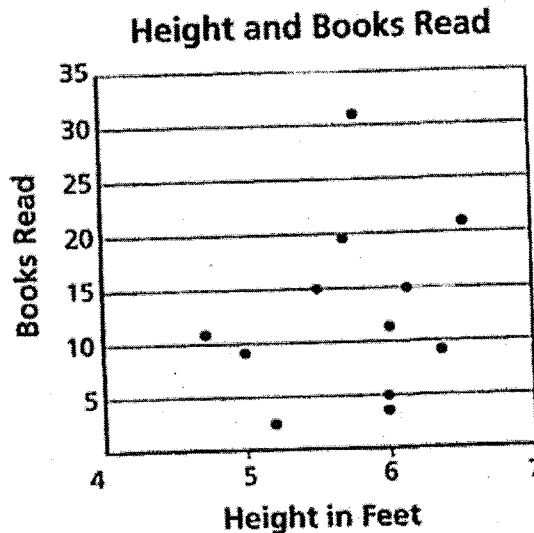
9) For a science project, Nicole counted fireflies each evening. She also recorded the temperature. The data is displayed in the scatterplot below.



Based on the data in this scatterplot, predict the number of fireflies Nicole will see when the temperature is 100 °F.

- a. 8-10
- b. 10-12
- c. 12-16
- d. 16-20

10) Which BEST describes the relationship between height and number of books read?



- a. Height depends on the number of books read.
- b. The number of books read depends on height.
- c. There is no relationship between books read and height.
- d. More data is needed.

11) Several students were asked if they have a computer at home and what grade they are in. The survey results are shown in Diagram A and the two-way table that summarizes the data is shown in Diagram B.

Diagram A

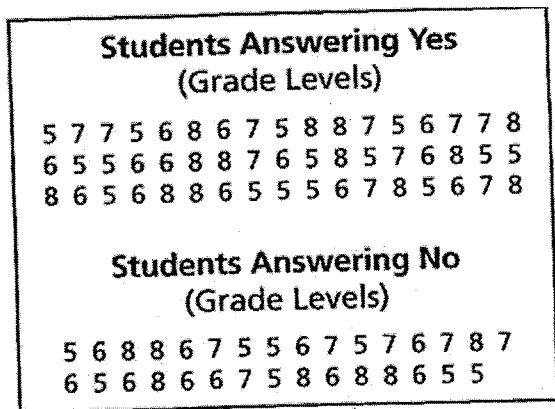


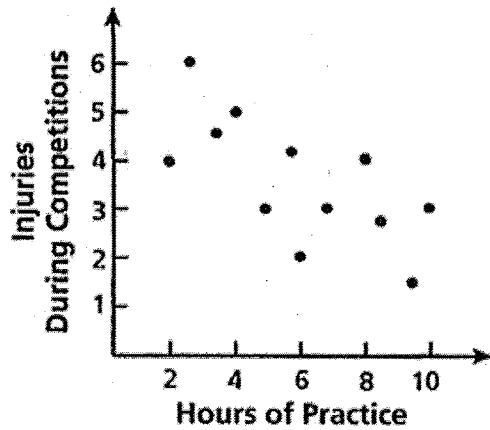
Diagram B

	Gr. 5	Gr. 6	Gr. 7	Gr. 8
Yes	15	13	10	13
No	8	10	?	7

What is the missing number in the table?

- a. 6
- b. 7
- c. 8
- d. 10

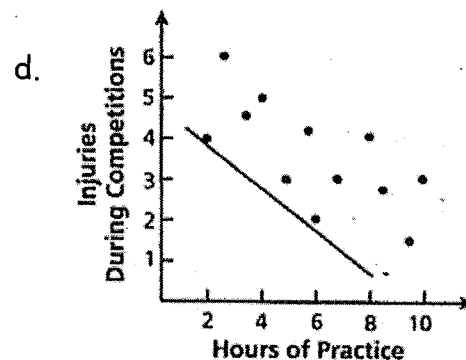
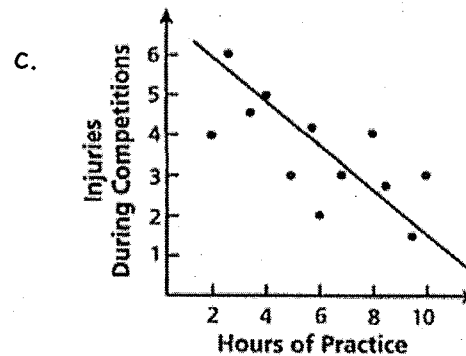
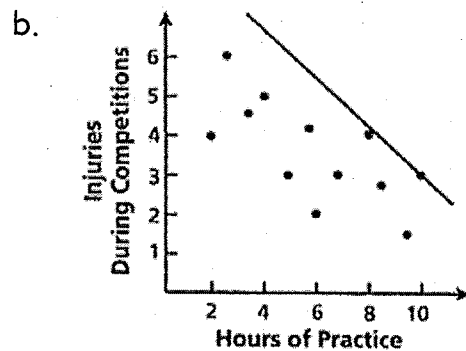
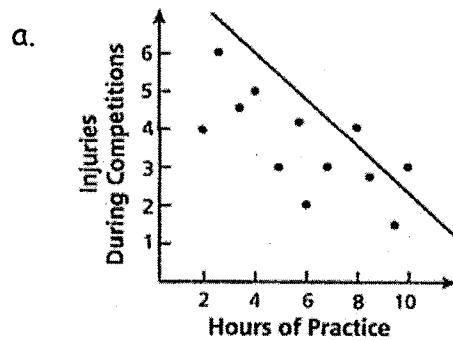
12) The scatterplot below compare the number of injuries during track events to the number of hours athletes practice before a competition.



Which best describes the correlation between the number of injuries and the hours of practice: **positive**, **negative**, or **no correlation**?

Answer: _____

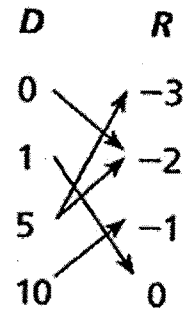
13) Which shows the line of best fit for the scatter plot?



14) Which set of ordered pairs is a function?

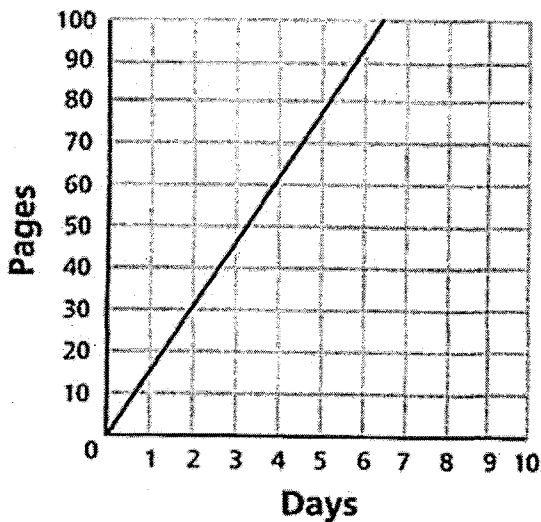
- a. $\{(1.6, 2), (1.4, 1), (1.4, 2)\}$
- b. $\{(0.3, 33), (0.2, 22), (0.3, 333)\}$
- c. $\{(-2, 4), (-2, 1), (-2, 8)\}$
- d. $\{(4, -2), (1, -2), (8, -2)\}$

16) Which ordered pair is a member of the relation shown in this mapping?



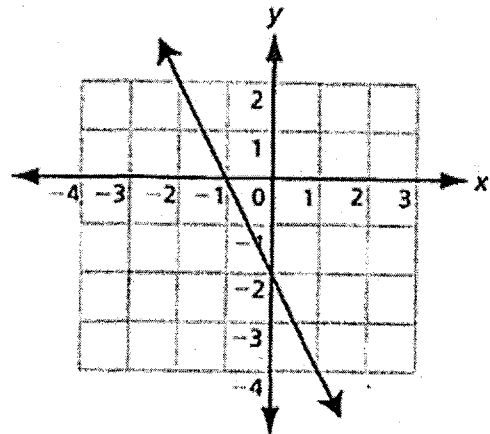
- a. $(-3, 0)$
- b. $(1, -1)$
- c. $(0, -2)$
- d. $(-3, 5)$

15) Which relationship could be shown by this graph?



- a. The number of pages Joyce reads if she reads 15 pages each day.
- b. The number of days it takes Joyce to read a book if she reads 20 pages a day.
- c. The number of books Joyce can read if she reads 5 books a month.
- d. The number of weeks it takes Joyce to read a book if she reads 100 pages a week.

17) Which table below contains the points shown on this graph?



- a.

x	y
-3	3
-2	2
-1	1
- b.

x	y
-1	0
2	0
-2	2
- c.

x	y
-1	0
0	-2
1	-4
- d.

x	y
0	-2
1	-4
2	-2

18) Which rule is true for all of the pairs of values in the table?

x	-2	0	2	4
y	-5	-1	3	7

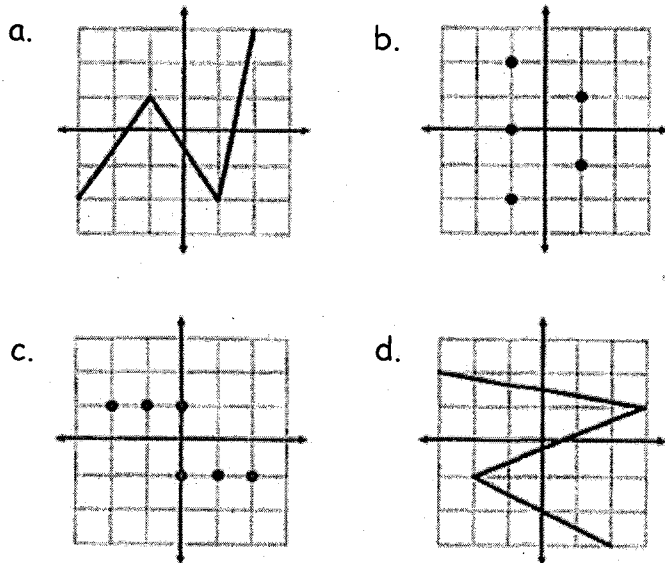
- a. $y = x - 3$
- b. $y = 3x + 1$
- c. $y = 2x + 1$
- d. $y = 2x - 1$

20) Which rule was used to make this table?

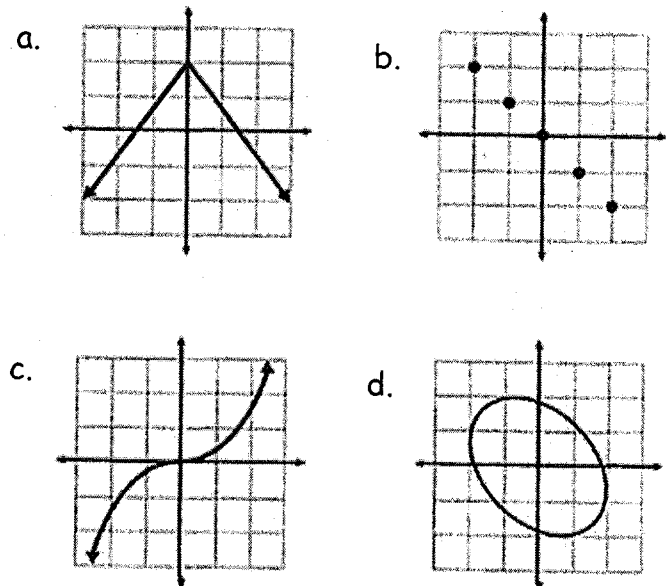
Input	Output
400	200
300	150
200	100
150	75
100	50

- a. Divide by 2.
- b. Subtract 200.
- c. Subtract 150.
- d. Divide by 3.

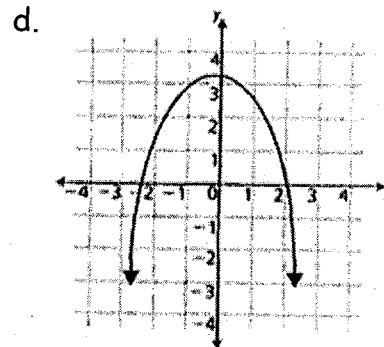
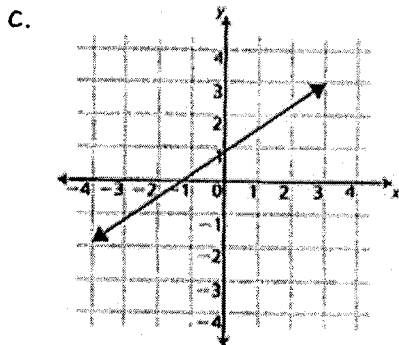
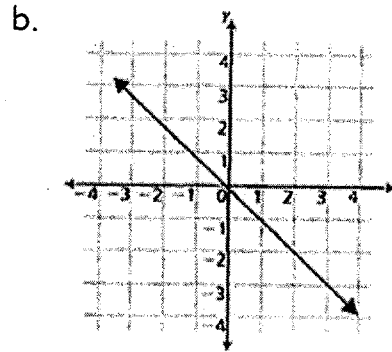
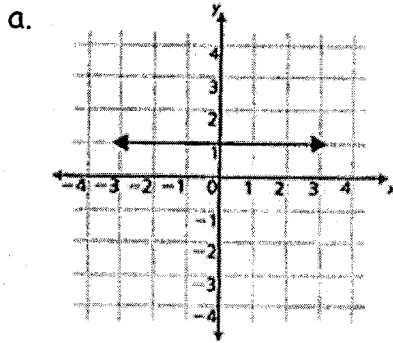
19) Which graph shows a function?



21) Which graph does NOT show a function?



22) Which is the graph of a non-linear function?



23) Which set of ordered pairs is a function?

- a. $\{(-1, 2), (0, -1), (1, 2), (0, 0)\}$
- b. $\{(-1, 3), (0, 0), (-1, 4), (2, 0)\}$
- c. $\{(-1, 10), (0, 8), (1, 6), (2, 4)\}$
- d. $\{(-1, 6), (0, 2), (-1, 4), (2, 6)\}$