

Examgen 8th Grade Common Core Math Sample Questions

Name: _____

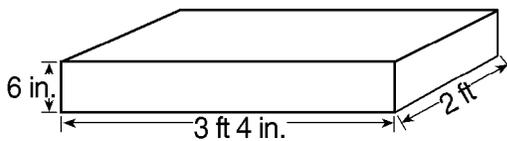
- 1) What is an equation of the linear function that represents the following table of values?

x	y
1	-1
2	0
3	1

- A) $h(x) = x - 2$ C) $h(x) = x - 1$
 B) $h(x) = x + 2$ D) $h(x) = -x$
- 2) On the blank number line below, plot the approximate location of $\sqrt{94}$.



- 3) A farmer feeds his animals twice a day from a rectangular trough filled to the top. The trough is 3 ft 4 in. long, 2 ft wide, and 6 in. high.



Assuming the animals completely empty the trough of food, how many cubic inches of food do his animals eat each day?

- A) $2,880 \text{ in.}^3$ C) $11,520 \text{ in.}^3$
 B) $5,760 \text{ in.}^3$ D) $10,368 \text{ in.}^3$
- 4) What is the value of $\sqrt{169}$?
- A) 26 C) 13
 B) 84.5 D) 28,561
- 5) Find a fraction with greater than five but less than 10 digits in the repeating part of its decimal. Write the fraction and its equivalent decimal expansion.
- 6) Convert $\frac{5}{14}$ to a decimal. Round to the nearest thousandth.
- A) 0.347 C) 0.357
 B) 0.356 D) 2.8

- 7) The two equations given below are for the line of best fit to represent the data in the accompanying table.

x	y
1	24
2	27
4	36
6	44
8	46
10	57

$y = 3.5x + 21$
 $y = 2.7x + 18$

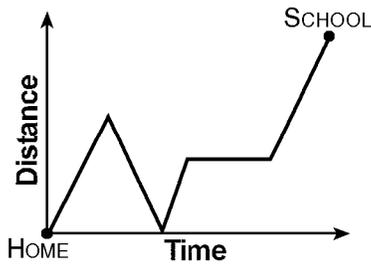
Which equation best represents the line of best fit? [Justify your answer.]

- 8) The chart below shows the number of hours 6 students spent studying for a Biology test and the grade they received on that test.

Hours Spent Studying	2	$\frac{1}{2}$	0	$2\frac{1}{2}$	1	$1\frac{1}{2}$
Grade	88	74	70	98	80	90

- a) Use this data to create a scatter plot.
- b) Describe the relationship that exists between the hours spent studying and the grade received.

- 9) The graph below indicates Juanita's distance from home as she travels to school.



Which of the following *best* describes Juanita's journey to school?

- A) She dashes out the door, slows her pace down, starts skipping, jogs at a steady pace, and finally sprints to school.
 B) She runs out the door, slows down to pick up a dollar, starts running again, stops to buy some candy, and finally runs to school.
 C) She leaves for school, stops to play with a puppy, continues on her way, stops at the market to buy a cola, and finally arrives at school.
 D) She leaves for school, returns home to retrieve a homework assignment, leaves for school again, waits for a train to pass, and finally arrives at school.
- 10) Which one of the following tables is an example of y being proportional to x ?

A)

x	y
2	4
3	6
4	8

B)

x	y
2	4
3	5
4	6

C)

x	y
2	4
3	3
4	2

D)

x	y
2	4
3	9
4	16

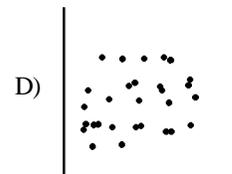
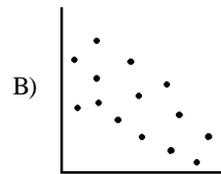
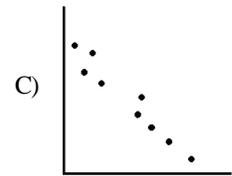
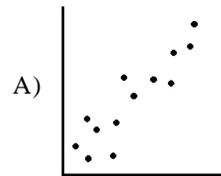
- 11) A company has discovered that there is a linear relationship between the amount of money it spends on advertising and the number of units sold. If it spends \$4,000 on advertising, 500 units are sold. When no money is spent on advertising, 380 units are sold.

- (a) Write a linear function to model the relationship between the number of units sold and the amount of money spent on advertising.
 (b) Explain the meaning of the slope in the context of the problem.

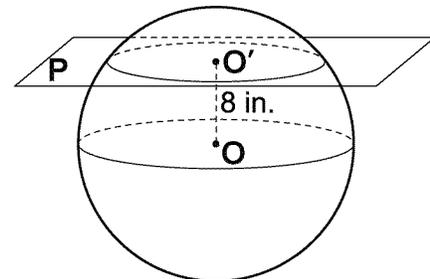
- 12) Which of the following fractions has a repeating decimal expansion (other than repeating zero)?

- A) $\frac{17}{20}$ B) $\frac{17}{25}$ C) $\frac{17}{34}$ D) $\frac{17}{19}$

- 13) For which scatter plot is there a strong negative correlation with a gap?



- 14) A plane P intersects a sphere with center O , forming a circle O' . If the plane is 8 inches from center O and the area of circle O' is 225π square inches, find (in terms of π) the number of cubic inches in the volume of the sphere.



15) Which of the following is the correct graphic representation of the linear function $f(x) = -2x + 1$?

