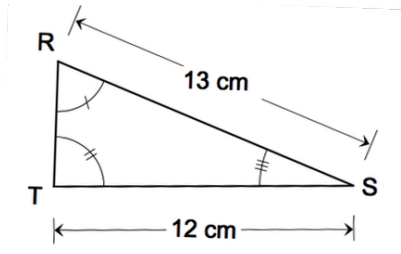


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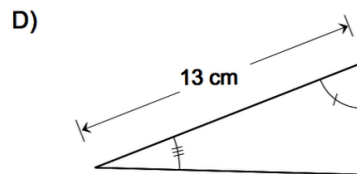
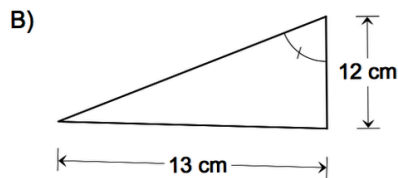
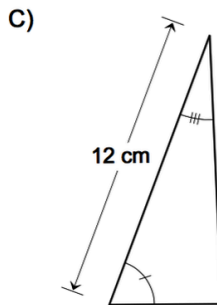
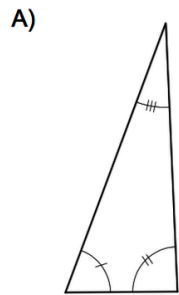
Date: \_\_\_\_\_

**PART A**

1. Consider triangle RST shown at right.



Which of the following triangles is definitely congruent to triangle RST?



2. What is the mean deviation of the following distribution:

{ 24 , 24 , 36 , 36 , 40 , 48 , 48 , 48 }

A) 0

B) 3.5

C) 4.75

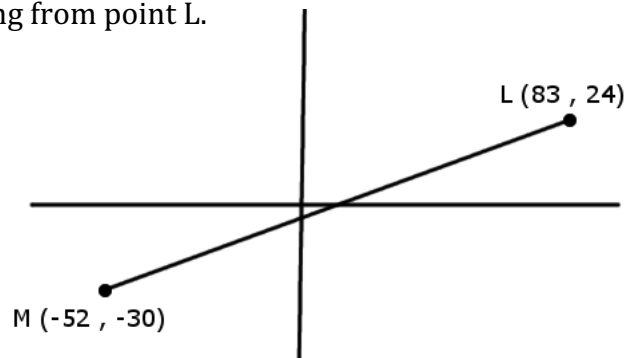
D) 8

3. Point P  $(-7, 50)$  is on a line in the Cartesian plane.  
The slope of the line is greater than 0.

Which of the following statements is true?

- A) The x-intercept is **positive** and the y-intercept is **positive**
- B) The x-intercept is **positive** and the y-intercept is **negative**
- C) The x-intercept is **negative** and the y-intercept is **positive**
- D) The x-intercept is **negative** and the y-intercept is **negative**

4. Point P divides line LM into a ratio of 4:5, starting from point L.  
What are the coordinates of point P?



- A)  $(56, 13.2)$
- B)  $(-25, -19.2)$
- C)  $(8, -6)$
- D)  $(23, 0)$

5. Consider the following system of equations.

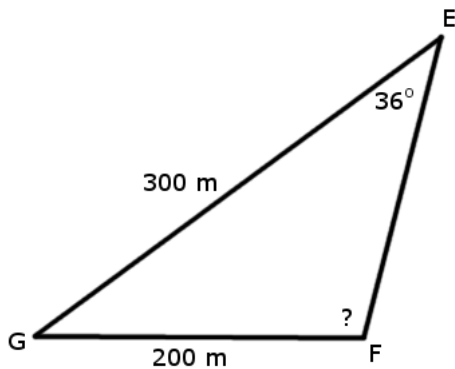
$$\text{Eq. 1) } 16.5x - 2y - 64 = 0$$

$$\text{Eq. 2) } 4y = 33x + 110$$

Which of the following statements is true?

- A) The system of equations has 0 solutions
- B) The system of equations has 1 solutions
- C) The system of equations has 2 solutions
- D) The system of equations has infinite solutions

6. Consider obtuse-angle triangle GFE represented below

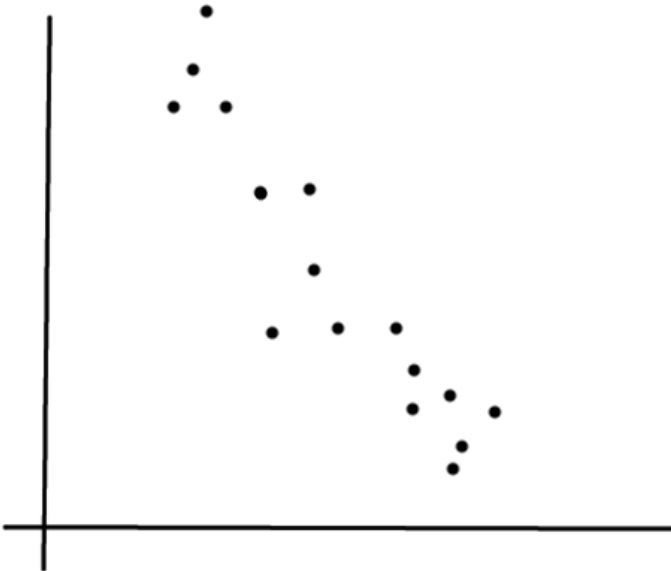


To the nearest degree, what is the measure of obtuse angle GFE?

- A) 96°
- B) 118°
- C) 126°
- D) 132°

**PART B**

7. What is the approximate value of the linear correlation coefficient?



Answer:  $r =$  \_\_\_\_\_

8. The function below can be used to find the value of Jimmy's house in relation to the time elapsed, starting from today.

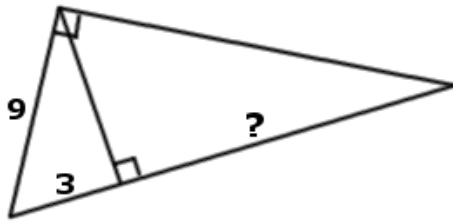
$$y = 200\,000 (1.1)^x$$

where  $x$  : time elapsed, starting from today, in years.  
 $y$  : value of Jimmy's house, in \$

Starting from today, in how much time will Jimmy's be worth \$ 322 102?

Answer: \_\_\_\_\_ years

9. Find the value of '?' to the nearest tenth of a unit.



Answer: \_\_\_\_\_ units

10. The data listed below represent the marks obtained by 32 students on a mathematics test.

68	51	84	78	64	66	66	48	98	71	75
53	58	64	62	58	82	78	54	90	81	63
70	72	34	73	58	63	72	54	82	73	

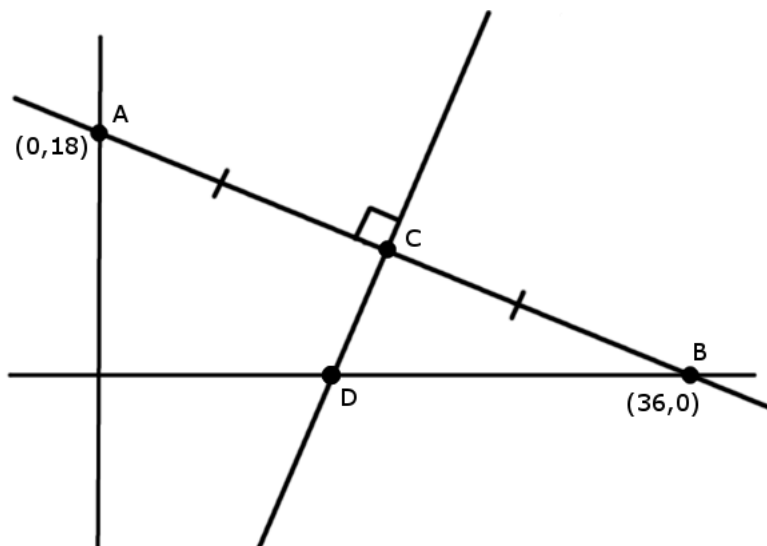
What is the percentile rank of a student with a mark of 66%?

Answer: The percentile rank is \_\_\_\_\_.

**PART C**

**11.** Find the distance between point C and point D.  
Round your final answer to the nearest tenth of a unit.

- Line AB meets line CD at a right angle.
- The distance from point A to C is the same as from B to C
- Point D is on the X-axis.



**Answer:** The distance from C to D is \_\_\_\_\_ units.