

Math 4 CST Review for midyear

Answers

1.

Measure of segment FG :

$$m \overline{FG} = \sqrt{(-1 - (-4))^2 + (-5 - (-3))^2} = \sqrt{13}$$

$$m \overline{FG} \approx 3.605\ 55$$

Co-ordinates of M : $\left(\frac{0 + 3}{2}, \frac{4 + (-2)}{2} \right) = \left(\frac{3}{2}, 1 \right)$

Measure of segment GM :

$$m \overline{GM} = \sqrt{(1 - (-1))^2 + \left(\frac{3}{2} - (-5) \right)^2} = \sqrt{46.25}$$

$$m \overline{GM} \approx 8.800\ 74$$

Length of new water main :

$$m \overline{FG} + m \overline{GM} = 10.406\ 29$$

2. A

3. C

4. A

5. C

6.

6

a) Intersecting

b) Perpendicular

c) Coincident

d) Parallel distinct

e) Perpendicular

7. a) (3,4) b) (2,3)

8. System of linear relations

Given x : registration fee

y : fixed daily rate

System of equations

$$x + 3y = 120 \quad (1)$$

$$x + 5y = 160 \quad (2)$$

Solution of the system of equations

$$x + 3y = 120$$

$$-x - 5y = -160$$

$$-2y = -40$$

$$y = 20$$

Replacing this value in the 1st equation

$$x + 3(20) = 120$$

$$x + 60 = 120$$

$$x = 60$$

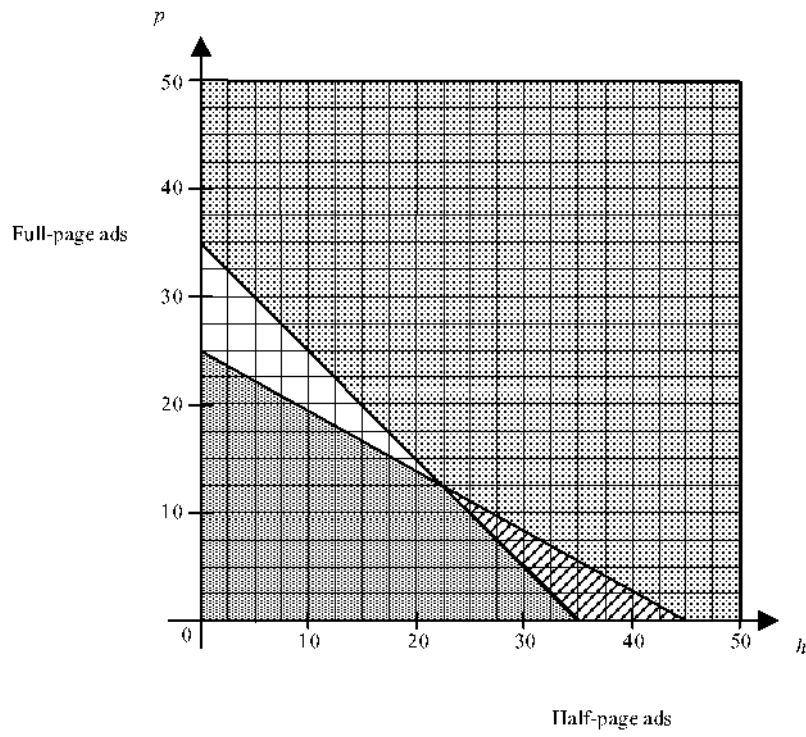
Total cost of the registration and 2 days at camp

$$C = 60 + 2(20) = 100$$

Result : \$100

9. The percentile rank is 78.

10.



11. A

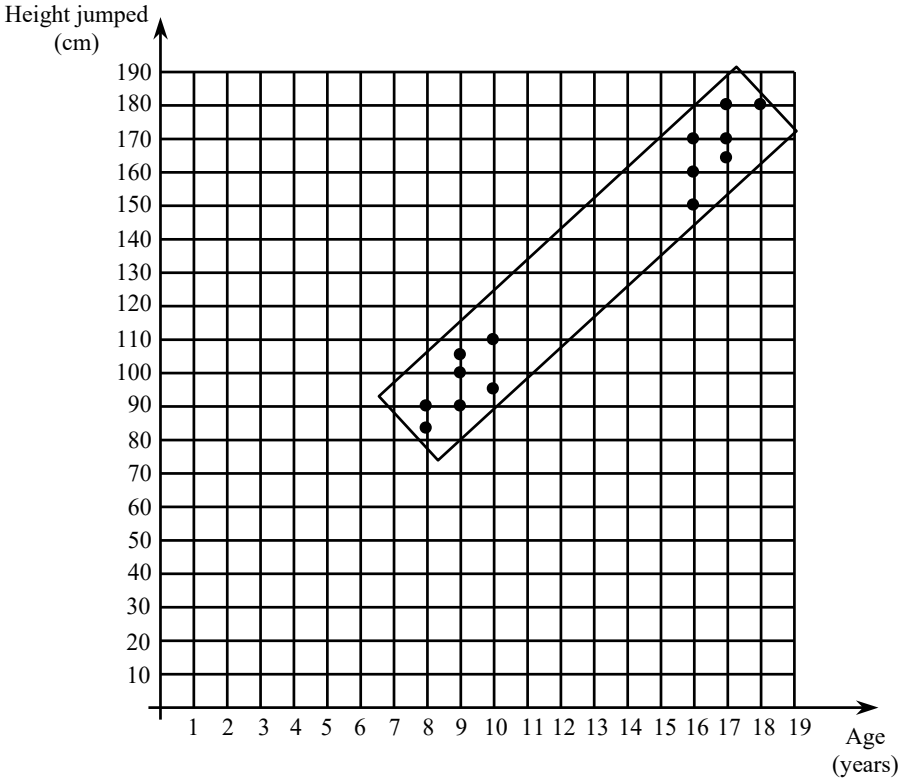
12. B

13. A

14. Accept values ranging from -0.85 to -0.75.

15. C

16. Scatter plot for this situation



After drawing a rectangle around the points, the student can estimate how high a 13-year-old child would jump.

Answer A 13-year-old child could be expected to jump 133 cm.

17. C