

MTH-3017

Pretest DB

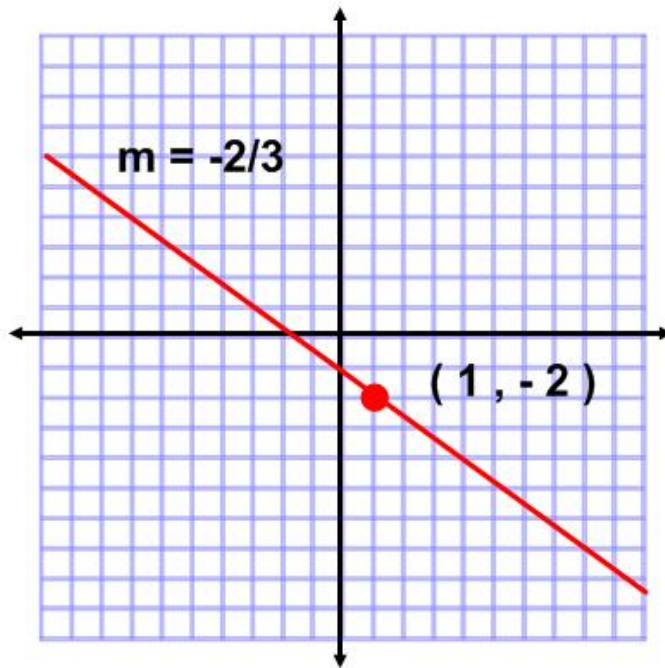
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1. Using the form $y = mx + b$, identify the slope and y-intercept of the following straight line equation. (2 marks)

$$y = 0.3x - 7$$

2. Find the slope of the line that goes through the points $(3, 5)$ and $(3, -1)$. (4 marks)
3. Derive the equation of the following straight line. Express the equation in either the $y=mx+b$ format or the $Ax+By+C=0$ format. (10 marks)



4. Solve with a graph. Indicate the scale chosen. (10 marks)

When Derek drives 160km, he uses 12L of gas. When he drives 400km he uses 28L of gas. If a straight line equation applies to this situation, how many kilometers can Derek drive with 15L of gas?

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5. Using the form $Ax + By + C = 0$ and the formula $m = \frac{-A}{B}$, find the slope of the following straight line equation. (4 marks)

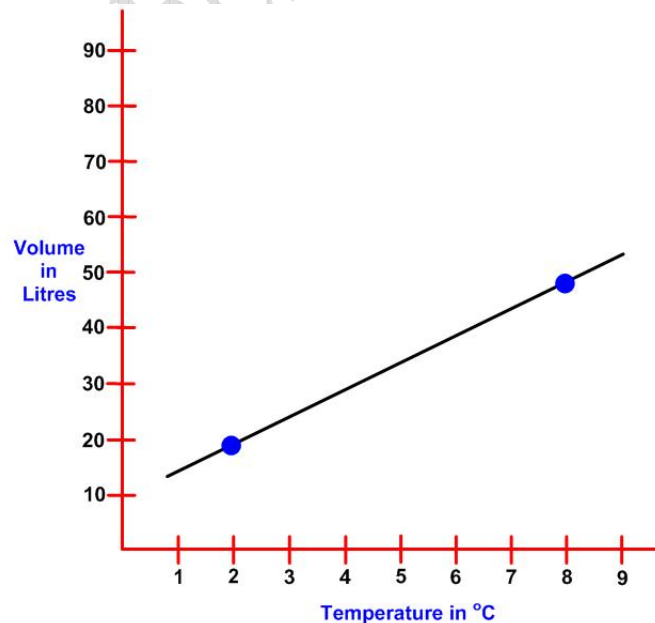
$$0 = 2y - 5x - 2$$

6. Graph the straight line that goes through the point $P(-1, 2)$ and has a slope of $\frac{-4}{5}$. Identify two points on the line. (4 marks)

7. Solve with a graph. Indicate the scale chosen. (10 marks)

2 hours after the beginning of the day, there are 35 pieces of litter blowing around the schoolyard. 5 hours later, there are 91 pieces of litter. If a straight line equation applies to this situation, how many pieces of litter were there 5 hours after the beginning of the day?

8. For the following graph, give the slope with its unit of measure. (4 marks)



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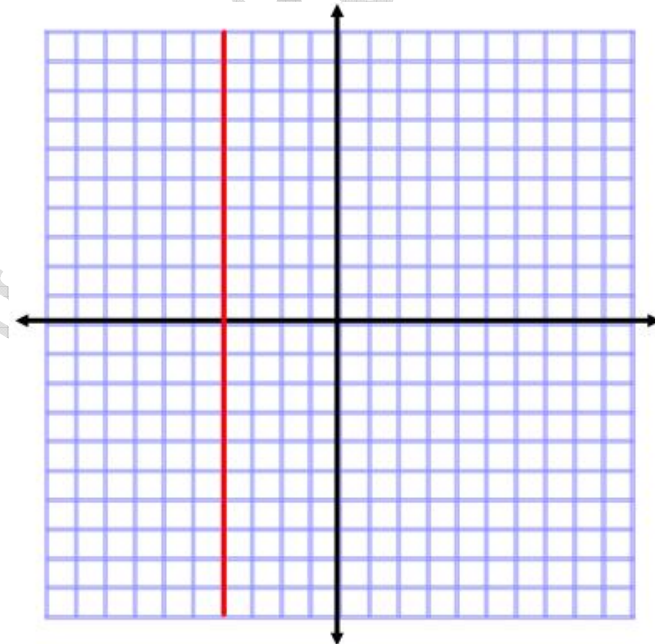
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9. Derive the equation of a straight line that goes through the points (3 , 5) and (-1 , 4). Express the equation in either the $y=mx+b$ format or the $Ax+By+C=0$ format. (10 marks)

10. Graph the following equation. Identify three points, including all intercepts, in a table of values, and label three points on the graph. (10 marks)

$$-y = 3x - 4$$

11. For the following graph, identify the type of slope. (2 marks)



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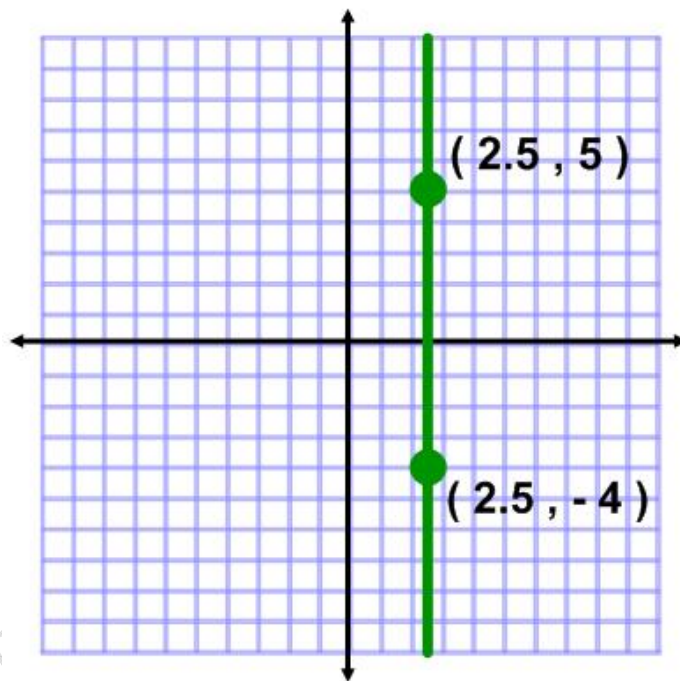
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12. Graph the following equation. Identify three points, including all intercepts, in a table of values, and label three points on the graph. (10 marks)

$$\frac{x}{2} + \frac{3y}{4} = 2$$

13. Derive the equation of the following straight line. Express the equation in either the $y=mx+b$ format or the $Ax+By+C=0$ format. (10 marks)



14. Graph the following equation. Identify three points, including all intercepts, in a table of values, and label three points on the graph. (10 marks)

$$x + y + 2 = 2x - 3y + 4$$