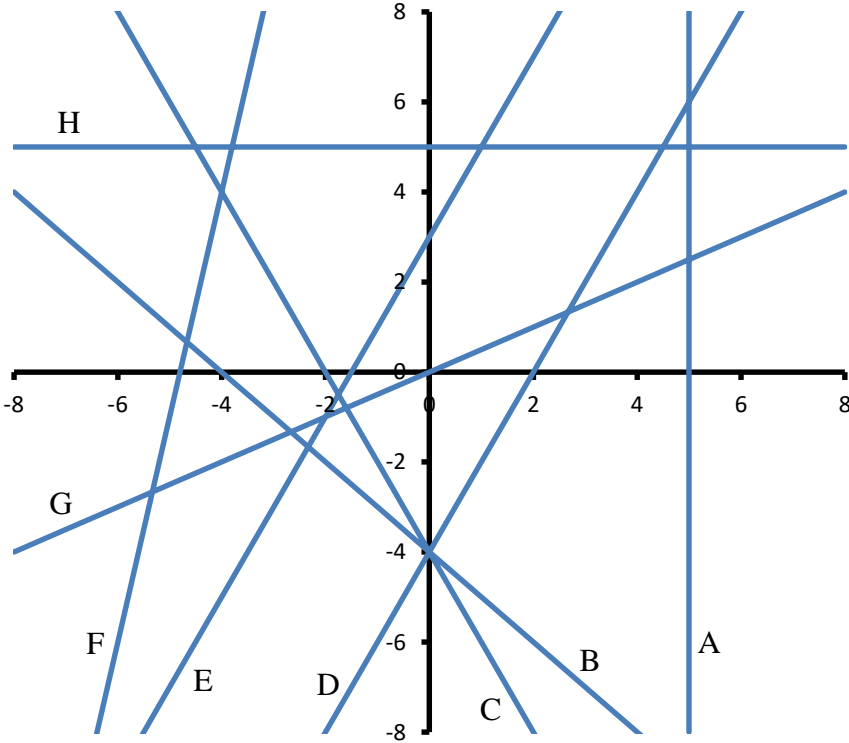


# Coordinate Geometry Quiz

Level 1 – 2

1. Match the equations with the lines by writing the correct letter next to each equation.



- $y = 2x - 4$  .....
- $y = 2x + 3$  .....
- $y = 5$  .....
- $y = -x - 4$  .....
- $y = -2x - 4$  .....
- $x = 5$  .....
- $y = x/2$  .....
- $y = 5x + 24$  .....

2. Determine i) the coordinates of the midpoint and ii) the length of the line connecting the following points:

- a) (2,3) and (6,3)
  - i) .....
  - ii) .....
  
- b) (6,1) and (6,8)
  - i) .....
  - ii) .....
  
- c) (-1,2) and (5,10)
  - i) .....
  - ii) .....

Level 3 – 4

3. Determine the equation of the line passing through the following points. Write your answer in the form  $Ax + By + D = 0$ .

a)  $(7, -1)$  and  $(7, 5)$

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b)  $(2, -3)$  and  $(4, -3)$

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c)  $(3, 6)$  and  $(5, 2)$

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d)  $(7, 2)$  and  $(3, -1)$

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4. Determine the equation of the perpendicular bisector of the line connecting the points  $(2, 5)$  and  $(6, 7)$ . Write your answer in the form  $y = mx + c$ .

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Level 5 – 6

5. Two fire stations are located at points (3,8) and (9,5) where units are in km. City hall wishes to improve their response time to emergencies by assigning firefighters from only the closest fire station. Determine the equation of the line that separates the two areas of responsibility of the two fire stations.

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6. Determine the area of the shape bound by the lines  $x = 1$ ,  $x = 3$ ,  $y = x$  and  $y = 8 - x$ .

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d) Hence explain why point  $P$  follows the path of a circle of radius 5 m as the ladder slips.

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