

## UNIT 5 Linear Graphs and Equations

## Mental Tests

### M 5.1 Standard Route *(no calculator)*

*You will need the Information Sheet*

1. Write down the coordinates of the point B. (3, 3)
  2. Write down the coordinates of the point M. (1, - 8)
  3. Write down the coordinates of the point N. (- 4, - 2)
  4. Write down the coordinates of the point F. (- 2, 6)
  5. Which point has coordinates (0, 8)? (G)
  6. Which point has coordinates (2, 10)? (H)
  7. Which point has coordinates (- 4, 4)? (E)
  8. Which point has coordinates (- 4, - 2)? (N)
  9. Which point has the same  $x$ -coordinate as point K ? (L)
  10. Which point has the same  $y$ -coordinate as point K ? (J)
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### M 5.2 Academic Route *(no calculator)*

*You will need the Information Sheet*

1. Write down the coordinates of the point P. (8, 0)
2. Write down the coordinates of the point R. (- 4, 2)
3. Which point has coordinates (- 2, 6)? (F)
4. Which point has coordinates (- 4, - 2)? (N)
5. What is the gradient of a line that joins the points E and F ? (1)
6. What is the gradient of a line that joins the points R and F ? (2)
7. What is the gradient of a line that joins the points R and A ?  $(-\frac{1}{5})$
8. The points A, B, C and D lie on a straight line.  
What is the equation of the line? ( $y = x$ )
9. The points E and J lie on a straight line.  
What is the equation of the line? ( $y = -x$ )
10. Which point has the same  $y$ -coordinate as point K? (J)

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**M 5.3 Express Route** *(no calculator)**You will need the Information Sheet*

1. Write down the coordinates of the point L. (6, -7)
  2. Write down the coordinates of the point F. (-2, 6)
  3. Which point has coordinates (-4, 4)? (E)
  4. What is the gradient of a line that joins the points Q and J?  $\left(\frac{1}{7}\right)$
  5. What is the gradient of a line that joins the points R and F? (2)
  6. What is the gradient of a line that joins the points M and H? (18)
  7. What is the gradient of a line that joins the points Q and L?  $\left(-\frac{3}{10}\right)$
  8. The points E, F, G and H lie on a straight line.  
What is the equation of the line? ( $y = x + 8$ )
  9. The points E and J lie on a straight line.  
What is the equation of the line? ( $y = -x$ )
  10. The points F and S lie on a straight line.  
What is the equation of the line? ( $y = -2x + 2$ )
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## Information Sheet

