

CORE 1 – LINEAR GRAPHS AND EQUATIONS SKILLS CHECK

<p>CHECK 1 Find the gradients of the lines joining the following pairs of points</p> <p>a) (2, 5) and (8, 17)</p> <p>b) (6, 2) and (-2, 18)</p>	
<p>CHECK 2 Find the midpoints of the lines joining the following pairs of points</p> <p>a) (1, 8) and (5, 14)</p> <p>b) (-5, 3) and (7, -7)</p>	
<p>CHECK 3 Find the gradients of the following lines</p> <p>a) $y = 4x + 2$</p> <p>b) $y = 6 - 3x$</p> <p>c) $4x = y - 2$</p> <p>d) $2y + 6x = -4$</p> <p>e) $4y - 2x = 7$</p> <p>f) $\frac{1}{2}y = 3x + 4$</p> <p>g) $\frac{1}{2}x + \frac{1}{4}y = 2$</p>	
<p>CHECK 4 Identify any parallel or perpendicular lines</p> <p>A $y = 5x + 2$</p> <p>B $5x + 2y = 4$</p> <p>C $5x - y = 7$</p> <p>D $5x - 2y = 4$</p> <p>E $5y = 2x - 3$</p>	

<p>CHECK 5 Find the equation of the line passing through (0,2) and (2, 12)</p>	
<p>CHECK 6 Find the equation of the line passing through (3,4) and (-3, 16)</p>	
<p>CHECK 7 Find the point of intersection of the graphs $2x + 3y = 10$ $3x - 2y = -11$</p>	
<p>CHECK 8 Find the point of intersection of the graphs $y = 10 + 6x$ $y = 2x + 6$</p>	
<p>CHECK 9 Find the point of intersection of the graphs $y = 1 - 2x$ $4y - 2x = 24$</p>	
<p>CHALLENGE QUESTION The points (5,0) (6,7) and (2,4) are 3 of the vertices of a square</p> <p>a) Find the coordinates of the 4th vertex</p> <p>b) The square is enlarged by scale factor 3 using the centre of the square as the centre of enlargement.</p> <p>Find the equations of the lines that form the sides of the new square.</p>	

<p>CHECK 1 Find the gradients of the lines joining the following pairs of points</p> <p>a) (2, 5) and (8, 17)</p> <p>b) (6, 2) and (-2, 18)</p>	<p>a) 2</p> <p>b) -2</p>
<p>CHECK 2 Find the midpoints of the lines joining the following pairs of points</p> <p>a) (1, 8) and (5, 14)</p> <p>b) (-5, 3) and (7, -7)</p>	<p>a) (3, 11)</p> <p>b) (1, -2)</p>
<p>CHECK 3 Find the gradients of the following lines</p> <p>a) $y = 4x + 2$</p> <p>b) $y = 6 - 3x$</p> <p>c) $4x = y - 2$</p> <p>d) $2y + 6x = -4$</p> <p>e) $4y - 2x = 7$</p> <p>f) $\frac{1}{2}y = 3x + 4$</p> <p>g) $\frac{1}{2}x + \frac{1}{4}y = 2$</p>	<p>a) 4</p> <p>b) -3</p> <p>c) 4</p> <p>d) -3</p> <p>e) $\frac{1}{2}$</p> <p>f) 6</p> <p>g) -2</p>
<p>CHECK 4 Identify any parallel or perpendicular lines</p> <p>A $y = 5x + 2$</p> <p>B $5x + 2y = 4$</p> <p>C $5x - y = 7$</p> <p>D $5x - 2y = 4$</p> <p>E $5y = 2x - 3$</p>	<p>A and C parallel</p> <p>B and E perpendicular</p>

<p>CHECK 5 Find the equation of the line passing through (0,2) and (2, 12)</p>	$y = 5x + 2$
<p>CHECK 6 Find the equation of the line passing through (3,4) and (-3, 16)</p>	$y = 10 - 2x$
<p>CHECK 7 Find the point of intersection of the graphs $2x + 3y = 10$ $3x - 2y = -11$</p>	$x = -1$ $y = 4$
<p>CHECK 8 Find the point of intersection of the graphs $y = 10 + 6x$ $y = 2x + 6$</p>	$x = -1$ $y = 4$
<p>CHECK 9 Find the point of intersection of the graphs $y = 1 - 2x$ $4y - 2x = 24$</p>	$x = -2$ $y = 5$
<p>CHALLENGE QUESTION The points (5,0) (6,7) and (2,4) are 3 of the vertices of a square</p> <p>a) Find the coordinates of the 4th vertex</p> <p>b) The square is enlarged by scale factor 3 using the centre of the square as the centre of enlargement.</p> <p>Find the equations of the lines that form the sides of the new square.</p>	<p>a) (9, 3)</p> <p>b) $4y = 3x + 35$ $4y = 3x - 40$ $3y = -4x - 5$ $3y = 70 - 4x$</p>