**QQQ – GCSE Straight Line Graphs**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| 1 | A straight line passes through the points . Determine its gradient.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 2 | Give the full coordinate of the point where the line crosses the -axis.  ( \_\_\_\_ , \_\_\_\_\_ ) |
| 3 | Give the equation of **a** line that is parallel to .  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 4 | Find the midpoint of and .  ( \_\_\_\_ , \_\_\_\_\_ ) |
| 5 | Find the equation of the line which passes through the points and .  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 6 | Find the equation of the line which is perpendicular to and passes through the point .  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 7 | Determine the gradient of the line with equation .  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 8 | Determine whether the line with equation is perpendicular to the line which goes through the points and . **(You must give a justification)**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 9 | Line has the equation .  , is a point on the -axis and .  Determine the length of .  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 10 | On the axis provided, draw the line with equation |

Score \_\_\_\_\_\_\_\_ /10 Award \_\_\_\_\_\_\_\_\_\_\_\_

Bronze: 7+, Silver: 8+, Gold: 9+, Platinum: 10

**ANSWERS**

|  |  |
| --- | --- |
| 1 | A straight line passes through the points . Determine its gradient. |
| 2 | Give the full coordinate of the point where the line crosses the -axis. |
| 3 | Give the equation of **a** line that is parallel to .  **(where is anything)** |
| 4 | Find the midpoint of and . |
| 5 | Find the equation of the line which passes through the points and . |
| 6 | Find the equation of the line which is perpendicular to and passes through the point . |
| 7 | Determine the gradient of the line with equation . |
| 8 | Determine whether the line with equation is perpendicular to the line which goes through the points and .  **Gradients are and**  **Since , the lines are not perpendicular (but are parallel).** |
| 9 | Line has the equation .  , is a point on the -axis and .  Determine the length of .  **Equation of :**  **So**  **Equation of (since parallel to ):**  **Therefore**  **Therefore length** |
| 10 | On the axis provided, draw the line with equation |

Score \_\_\_\_\_\_\_\_ /10 Award \_\_\_\_\_\_\_\_\_\_\_\_