

## **Worksheet: Finding Equations of Straight Lines**

This worksheet will help you to practise the mathematics of finding the equations of straight line from particular circumstances.

Finding Equations  
of Straight Lines  
study guide



Model Answers  
to this sheet



Write the equation of the straight line described by the following situations.

1. Straight line with gradient 3 which passes through the point  $(4, 2)$ .
2. Straight line with gradient  $-5$  which passes through the point  $(4, 2)$ .
3. Straight line which passes through  $(4, 2)$  and  $(5, 3)$ .
4. Straight line which passes through  $(4, 2)$  and  $(-8, -12)$ .
5. Straight line which passes through  $(4, 2)$  and the origin.
6. Straight line which passes through  $(5, 3)$  and  $(-8, -12)$ .
7. Horizontal line which passes through the point  $(4, 2)$ .
8. Vertical line which passes through the point  $(4, 2)$ .
9. Straight line which passes through  $(4, 2)$  and is parallel to  $y = 5x + 4$ .
10. Straight line which passes through  $(4, 2)$  and is perpendicular to  $y = 5x + 4$ .
11. Straight line which passes through  $(4, 2)$  and is parallel to the  $x$ -axis.
12. Straight line which passes through  $(4, 2)$  and is perpendicular to the  $x$ -axis.



This worksheet is one of a series on mathematics produced by the [Dean of Students' Office](#) at the University of East Anglia.  
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