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| <b>a</b> Find the equation: gradient 3, through (2, 7).<br><br>$y = 3x + 1$<br>a line from a gradient and a point                | <b>b</b> Find the equation: gradient -2, through (3, 1).<br><br>$y = -2x + 7$<br>a negative gradient through a point                         | <b>c</b> Find the equation: gradient $\frac{1}{2}$ , through (4, 5).<br><br>$y = \frac{1}{2}x + 3$<br>a fraction gradient through a point              | <b>d</b> Find the equation of the line through (1, 5) and (3, 11).<br><br>$y = 3x + 2$<br>the line through two points                                  |
| <b>e</b> Find the equation of the line through (-1, 4) and (2, -2).<br><br>$y = -2x + 2$<br>two points with negative coordinates | <b>f</b> Find the equation of the line through (2, 3) and (6, 5).<br><br>$y = \frac{1}{2}x + 2$<br>two points, a fraction gradient           | <b>g</b> Find the equation of the line through (3, 1) and (3, 8).<br><br>$x = 3$<br>two points with the same x                                         | <b>h</b> Find the gradient perpendicular to $y = 3x + 1$ .<br><br>$-\frac{1}{3}$<br>a perpendicular gradient                                           |
| <b>i</b> Find the gradient perpendicular to $y = -\frac{1}{4}x + 2$ .<br><br>$4$<br>perpendicular to a negative fraction         | <b>j</b> Find the gradient perpendicular to $y = \frac{2}{3}x - 1$ .<br><br>$-\frac{3}{2}$<br>perpendicular to a fraction like $\frac{2}{3}$ | <b>k</b> Find the equation of the line perpendicular to $y = 2x - 7$ at (4, 1).<br><br>$y = -\frac{1}{2}x + 3$<br>a perpendicular line through a point | <b>l</b> Find the equation of the line perpendicular to $3x + y = 11$ at (3, 2).<br><br>$y = \frac{1}{3}x + 1$<br>rearranging before the perpendicular |

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