a)
Write the equation of the line perpendicular to $y = 2x - 1$, which passes through (4, 6).

What is the gradient of the line?	The gradient of the given line is 2. The gradient of a line perpendicular to this line is the negative multiplicative inverse of 2, $-\frac{1}{2}$.
How can we begin to write an equation?	$y = -\frac{1}{2}x$ … …
What is the relationship between the coordinates we know?	$x = 4, y = 6$ $6 = -\frac{1}{2} \times 4$ … … $6 = -2 + 8$
What is the equation of the line?	$y = -\frac{1}{2}x + 8$

b)
Write the equation of the line perpendicular to $y = 4x - 1$, which passes through (12, 1).

What is the gradient of the line?	The gradient of the given line is 4. The gradient of a line perpendicular to this line is the negative multiplicative inverse of 4, $-\frac{1}{4}$.
How can we begin to write an equation?	$y = -\frac{1}{4}x$ … …
What is the relationship between the coordinates we know?	$x = 12, y = 1$ $1 = -\frac{1}{4} \times 12$ … …
What is the equation of the line?	

c)
Write the equation of the line perpendicular to $y = \frac{1}{2}x + 3$, which passes through (3, 11).

What is the gradient of the line?	The gradient of the given line is $\frac{1}{2}$. The gradient of a line perpendicular to this line is the negative multiplicative inverse of $\frac{1}{2}$, -2.
How can we begin to write an equation?	$y = -2x$ … …
What is the relationship between the coordinates we know?	
What is the equation of the line?	

d)
Write the equation of the line perpendicular to $y = 3x - 5$, which passes through (9, 5).