Perpendicular lines

Exit ticket ANSWERS Name _____

1. Find the gradient of a line perpendicular to $y = -2x + 3$.

$\frac{1}{2}$

2. Find the equation of the line with gradient 3 that passes through (2, 4).

$y = 3x - 2$

3. Find the equation of the line perpendicular to $y = \frac{1}{2}x - 1$ that passes through (2, 5).

$y = -2x + 9$

The Maths Habit

Perpendicular lines

Exit ticket ANSWERS Name _____

1. Find the gradient of a line perpendicular to $y = -2x + 3$.

$\frac{1}{2}$

2. Find the equation of the line with gradient 3 that passes through (2, 4).

$y = 3x - 2$

3. Find the equation of the line perpendicular to $y = \frac{1}{2}x - 1$ that passes through (2, 5).

$y = -2x + 9$

The Maths Habit

Perpendicular lines

Exit ticket ANSWERS Name _____

1. Find the gradient of a line perpendicular to $y = -2x + 3$.

$\frac{1}{2}$

2. Find the equation of the line with gradient 3 that passes through (2, 4).

$y = 3x - 2$

3. Find the equation of the line perpendicular to $y = \frac{1}{2}x - 1$ that passes through (2, 5).

$y = -2x + 9$

The Maths Habit

Perpendicular lines

Exit ticket ANSWERS Name _____

1. Find the gradient of a line perpendicular to $y = -2x + 3$.

$\frac{1}{2}$

2. Find the equation of the line with gradient 3 that passes through (2, 4).

$y = 3x - 2$

3. Find the equation of the line perpendicular to $y = \frac{1}{2}x - 1$ that passes through (2, 5).

$y = -2x + 9$

The Maths Habit

Perpendicular lines

Exit ticket ANSWERS Name _____

1. Find the gradient of a line perpendicular to $y = -2x + 3$.

$\frac{1}{2}$

2. Find the equation of the line with gradient 3 that passes through (2, 4).

$y = 3x - 2$

3. Find the equation of the line perpendicular to $y = \frac{1}{2}x - 1$ that passes through (2, 5).

$y = -2x + 9$

The Maths Habit

Perpendicular lines

Exit ticket ANSWERS Name _____

1. Find the gradient of a line perpendicular to $y = -2x + 3$.

$\frac{1}{2}$

2. Find the equation of the line with gradient 3 that passes through (2, 4).

$y = 3x - 2$

3. Find the equation of the line perpendicular to $y = \frac{1}{2}x - 1$ that passes through (2, 5).

$y = -2x + 9$

The Maths Habit

Exit ticket Perpendicular lines

1 **Find the gradient of a line perpendicular to $y = -2x + 3$.**

$\frac{1}{2}$

TESTS The perpendicular gradient

LOOK FOR

$-\frac{1}{2}$ flipped but the sign kept

2 the sign changed but not flipped

FIX IT

Find the gradient of a line perpendicular to $y = 4x - 1$. $-\frac{1}{4}$

---

2 **Find the equation of the line with gradient 3 that passes through (2, 4).**

$y = 3x - 2$

TESTS A line with a given gradient through a point: c from the point

LOOK FOR

$y = 3x + 2$ $4 = 6 + c$ solved as $6 - 4$: $c = 4 - 6 = -2$

$y = 3x + 4$ the y coordinate taken as c: only true when $x = 0$

FIX IT

Find the equation of the line with gradient 2 that passes through (3, 1). $y = 2x - 5$

---

3 **Find the equation of the line perpendicular to $y = \frac{1}{2}x - 1$ that passes through (2, 5).**

$y = -2x + 9$

TESTS The whole method: the perpendicular line through a point

LOOK FOR

$y = \frac{1}{2}x + 4$ the gradient of the given line used: this line is parallel

$y = -2x + 1$ $5 = -4 + c$ solved as $5 - 4$: $c = 5 + 4 = 9$

FIX IT

Find the equation of the line perpendicular to $y = 3x + 1$ that passes through (6, 4). $y = -\frac{1}{3}x + 6$