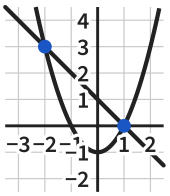
Simultaneous equations: linear and quadratic

Exit ticket ANSWERS Name _____

1 The graphs of $y = x^2 - 1$ and $y = 1 - x$ are drawn. Write down the coordinates of the points where they meet.



(1, 0) and (−2, 3)

2 Find the x values where the graphs of $y = x^2$ and $y = 3x + 18$ meet.

$x = 6$ or $x = -3$

3 Solve the simultaneous equations $y = x^2 - 1$ and $y = x + 5$.

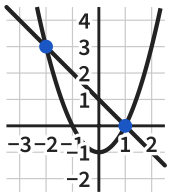
(3, 8) and (−2, 3)

The Maths Habit

Simultaneous equations: linear and quadratic

Exit ticket ANSWERS Name _____

1 The graphs of $y = x^2 - 1$ and $y = 1 - x$ are drawn. Write down the coordinates of the points where they meet.



(1, 0) and (−2, 3)

2 Find the x values where the graphs of $y = x^2$ and $y = 3x + 18$ meet.

$x = 6$ or $x = -3$

3 Solve the simultaneous equations $y = x^2 - 1$ and $y = x + 5$.

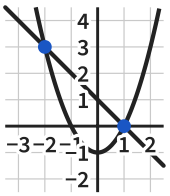
(3, 8) and (−2, 3)

The Maths Habit

Simultaneous equations: linear and quadratic

Exit ticket ANSWERS Name _____

1 The graphs of $y = x^2 - 1$ and $y = 1 - x$ are drawn. Write down the coordinates of the points where they meet.



(1, 0) and (−2, 3)

2 Find the x values where the graphs of $y = x^2$ and $y = 3x + 18$ meet.

$x = 6$ or $x = -3$

3 Solve the simultaneous equations $y = x^2 - 1$ and $y = x + 5$.

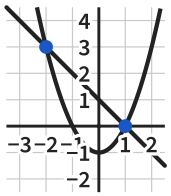
(3, 8) and (−2, 3)

The Maths Habit

Simultaneous equations: linear and quadratic

Exit ticket ANSWERS Name _____

1 The graphs of $y = x^2 - 1$ and $y = 1 - x$ are drawn. Write down the coordinates of the points where they meet.



(1, 0) and (−2, 3)

2 Find the x values where the graphs of $y = x^2$ and $y = 3x + 18$ meet.

$x = 6$ or $x = -3$

3 Solve the simultaneous equations $y = x^2 - 1$ and $y = x + 5$.

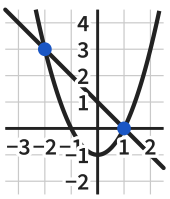
(3, 8) and (−2, 3)

The Maths Habit

Simultaneous equations: linear and quadratic

Exit ticket ANSWERS Name _____

1 The graphs of $y = x^2 - 1$ and $y = 1 - x$ are drawn. Write down the coordinates of the points where they meet.



(1, 0) and (−2, 3)

2 Find the x values where the graphs of $y = x^2$ and $y = 3x + 18$ meet.

$x = 6$ or $x = -3$

3 Solve the simultaneous equations $y = x^2 - 1$ and $y = x + 5$.

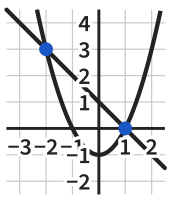
(3, 8) and (−2, 3)

The Maths Habit

Simultaneous equations: linear and quadratic

Exit ticket ANSWERS Name _____

1 The graphs of $y = x^2 - 1$ and $y = 1 - x$ are drawn. Write down the coordinates of the points where they meet.



(1, 0) and (−2, 3)

2 Find the x values where the graphs of $y = x^2$ and $y = 3x + 18$ meet.

$x = 6$ or $x = -3$

3 Solve the simultaneous equations $y = x^2 - 1$ and $y = x + 5$.

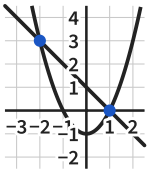
(3, 8) and (−2, 3)

The Maths Habit

Exit ticket Simultaneous equations: linear and quadratic

NEXT LESSON

1 **The graphs of $y = x^2 - 1$ and $y = 1 - x$ are drawn. Write down the coordinates of the points where they meet.**



(1, 0) and (−2, 3)

TESTS Reading where a line meets a curve off a graph

LOOK FOR
(0, 1) and (3, −2) x and y swapped: x first, across, then y, up
(0, −1) and (0, 1) where each graph crosses the y axis, not where they cross each other

FIX IT

Is the point (1, −2) on both $y = x^2 - 3$ and $y = -2x$? Show how you know.

Yes: $1^2 - 3 = -2$ and $-2 \times 1 = -2$

2 **Find the x values where the graphs of $y = x^2$ and $y = 3x + 18$ meet.**

$x = 6$ or $x = -3$

TESTS Putting the two equal, making it equal zero and factorising

LOOK FOR
$x = -6$ or $x = 3$ $x - 6 = 0$ gives $x = 6$
$x^2 - 3x + 18 = 0$ only the 3x moved: the 18 changes sign too

FIX IT

Find the x values where the graphs of $y = x^2$ and $y = 2x + 35$ meet. *$x = 7$ or $x = -5$*

3 **Solve the simultaneous equations $y = x^2 - 1$ and $y = x + 5$.**

(3, 8) and (−2, 3)

TESTS The whole method: each y from the line

LOOK FOR
$x = 3$ or $x = -2$ only each x needs its y: put it into the line
(3, 9) and (−2, 4) y found from $y = x^2$, leaving out the − 1: use the line

FIX IT

Solve the simultaneous equations $y = x^2 + 2$ and $y = x + 8$. *(3, 11) and (−2, 6)*