Corbett maths

Examples

Workout

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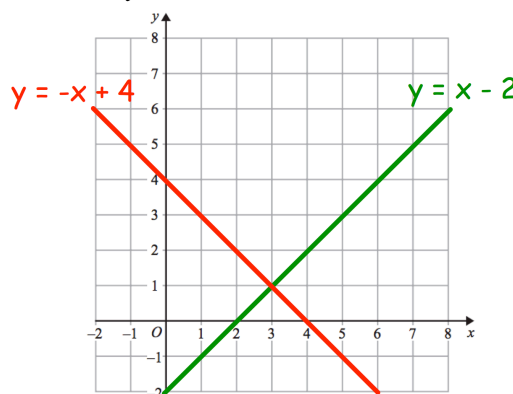Question 1:   Shown below are the graphs of $y = -x + 4$ and $y = x - 2$

(a) Write down the coordinates of the point
where the graphs of $y = -x + 4$ and
$y = x - 2$ intersect.

(b) Use your answer to (a) to solve the simultaneous
equations.
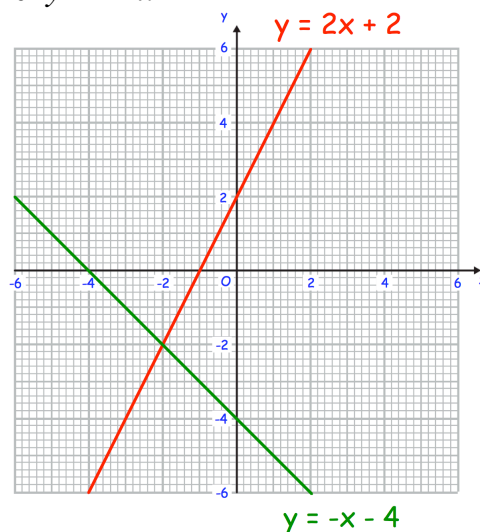$$y = -x + 4$$
$$y = x - 2$$

y = -x + 4   y = x - 2

Question 2:   Shown below are the graphs of $y = 2x + 2$ and $y = -x - 4$

(a) Write down the coordinates of the point
where the graphs of $y = 2x + 2$ and
$y = -x - 4$ intersect.

(b) Use your answer to (a) to solve the simultaneous
equations.
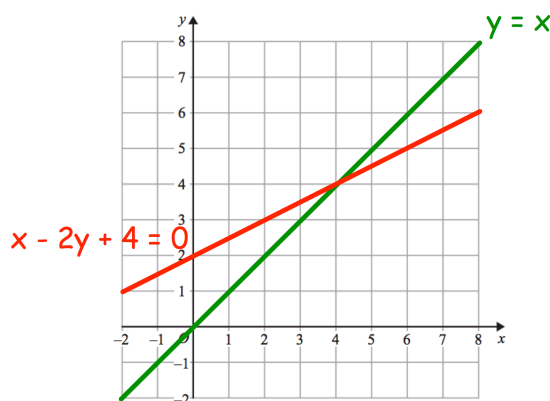$$y = -x - 4$$
$$y = 2x + 2$$

y = 2x + 2

y = -x - 4

Question 3:   Shown below are the graphs of $y = x$ and $x - 2y + 4 = 0$

(a) Write down the coordinates of the point
where the graphs of $y = x$ and
$x - 2y + 4 = 0$ intersect.

(b) Use your answer to (a) to solve the simultaneous
equations.
$$y = x$$
$$x - 2y + 4 = 0$$

y = x

x - 2y + 4 = 0

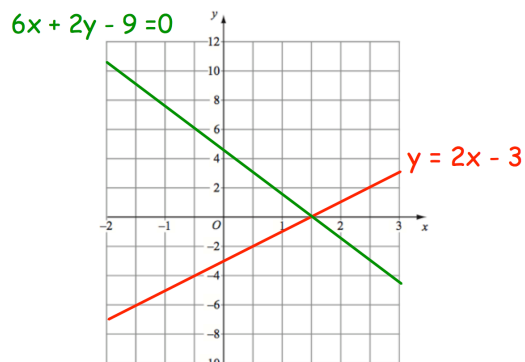**Question 4:** Shown below are the graphs of $6x + 2y - 9 = 0$ and $y = 2x - 3$

Use the graphs to solve the simultaneous equations

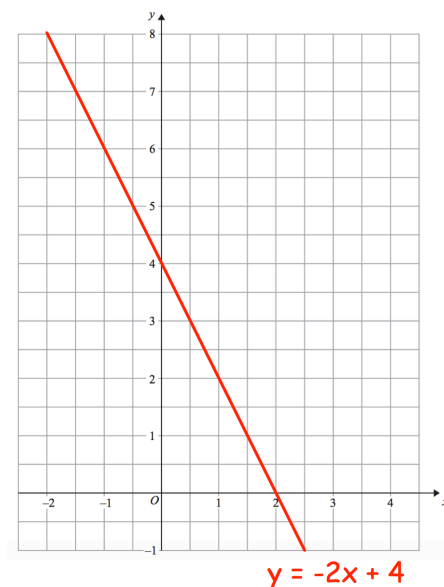$6x + 2y - 9 = 0$
$y = 2x - 3$.

Question 5: The straight line $y + 2x = 4$ has been drawn on the grid.

(a) On the same grid, draw the graph of $y = x + 1$

(b) Use the graphs to solve the simultaneous equations
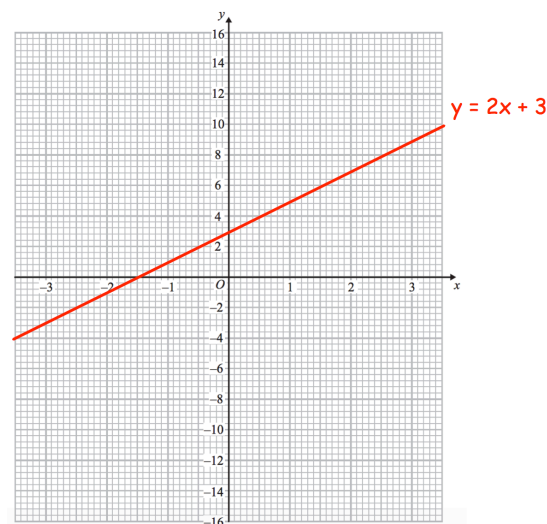
$y + 2x = 4$
$y = x + 1$.

$y = -2x + 4$

Question 6: The straight line $y = 2x + 3$ has been drawn on the grid.

(a) On the same grid, draw the graph of $y = -3x + 8$

(b) Use the graphs to solve the simultaneous equations

$y = 2x + 3$
$y = -3x + 8$

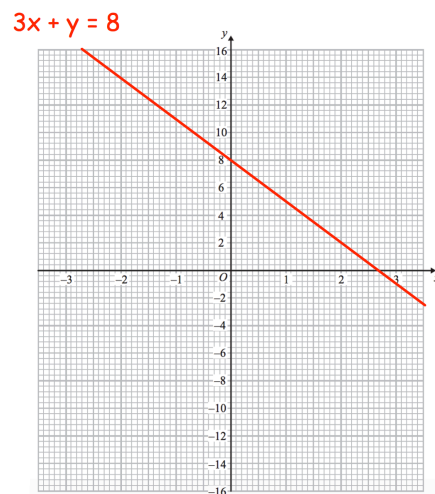© CORBETTMATHS 2019

Question 7: The straight line $3x + y = 8$ has been drawn on the grid.

(a) On the same grid, draw the graph of $x + y = 9$

3x + y = 8

(b) Use the graphs to solve the simultaneous equations

$$3x + y = 8$$
$$x + y = 9$$

Question 8: By drawing the graphs of $y = 3x + 1$ and $x + y = 7$

Solve the simultaneous equations
$$y = 3x + 1$$
$$x + y = 7$$

Question 9: By drawing the graphs of $y = 3x + 5$ and $x - 2y + 6 = 0$

Solve the simultaneous equations
$$y = 3x + 5$$
$$x - 2y + 6 = 0$$

Apply

Question 1: Jesse has been asked to graphically solve the simultaneous equations
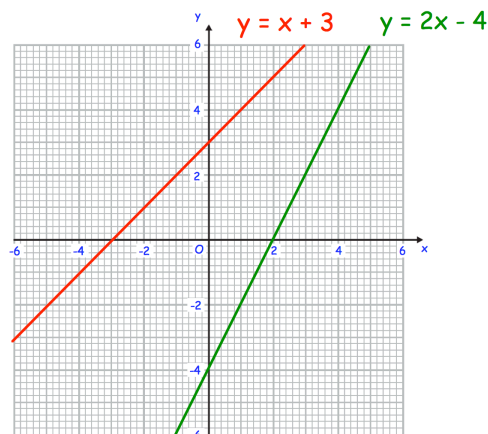
$$y = x + 3$$
$$y = 2x - 4$$

He has drawn the graph shown.

Jesse says that there is no answer to the simultaneous equations.

Explain why Jesse is incorrect.

y = x + 3   y = 2x - 4

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Question 2: Harry and Trevor are trying to solve the simultaneous equations
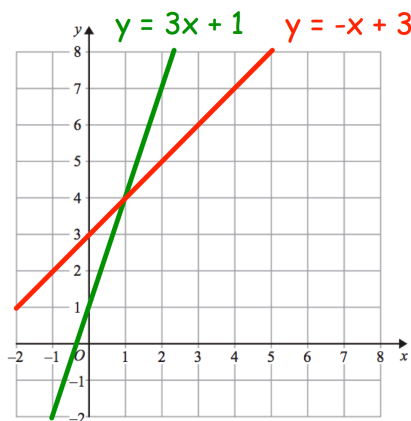
$y = 3x + 1$
$y = -x + 3$

Harry's answer is $x = 1$ and $y = 4$
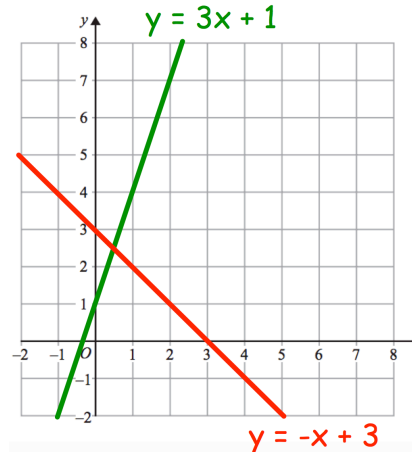Trevor's answer is $x = 0.5$ and $y = 2.5$

(a) By looking at the graphs below, decide who is correct
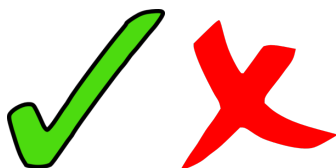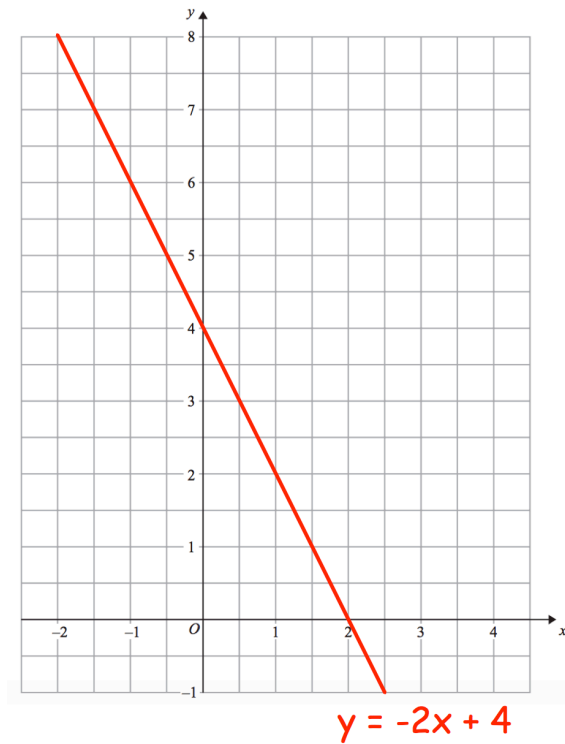
(b) What mistake was made by the other boy?

Harry

$y = 3x + 1$ $y = -x + 3$

Trevor

$y = 3x + 1$

$y = -x + 3$

Answers

✓ ✗

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Templates

Question 5

$y = -2x + 4$

Question 6

$y = 2x + 3$

Question 7

$3x + y = 8$