

Topic Test 1 (20 minutes)

Simultaneous equations (non-calculator) - Foundation

1 Here are two simultaneous equations

$$x + y = 8$$

$$x - y = 3$$

Which pair of coordinates satisfies both equations?

Circle your answer.

[1 mark]

(3, 5)

(6.5, 1.5)

(5.5, 2.5)

(2.5, 5.5)

2 Here are two simultaneous equations.

$$x + y = 9$$

$$x - 3y = 3$$

Which pair of coordinates satisfies both equations?

Circle your answer.

[1 mark]

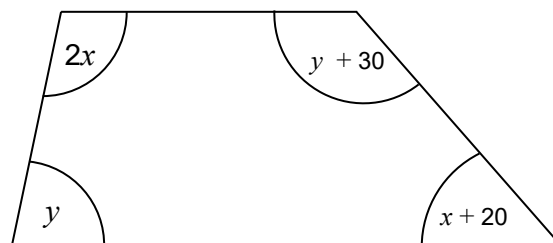
(3, 6)

(0, 9)

(12, -3)

(7.5, 1.5)

3 Here is a trapezium.



Not drawn accurately

Which **two** of these equations are true?

Circle your answers.

[1 mark]

$2x + y = 180$

$x + y = 160$

$x + y = 130$

$2x + y = 150$

6 Solve the simultaneous equations.

$$2x + y = 13$$

$$x + 2y = 17$$

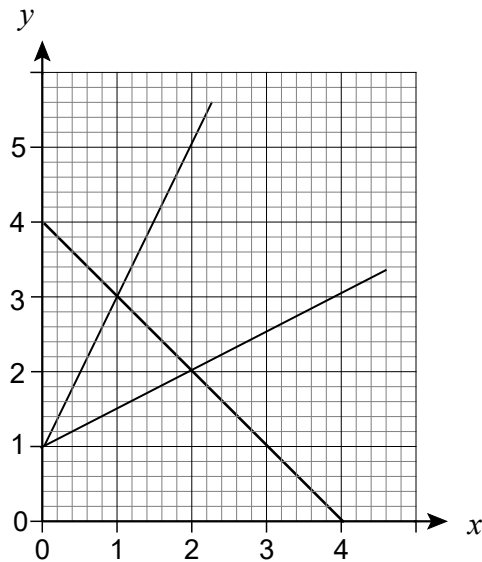
Do **not** use trial and improvement.

[3 marks]

$$x = \underline{\hspace{10cm}}$$

$$y = \underline{\hspace{10cm}}$$

7 The graphs of $y = 2x + 1$, $x + y = 4$ and $y = \frac{1}{2}x + 1$ are shown.



7 (a) Use the graph to solve the simultaneous equations $y = 2x + 1$ and $x + y = 4$ [1 mark]

Answer _____

7 (b) Use the graph to solve the simultaneous equations $y = 2x + 1$ and $y = \frac{1}{2}x + 1$ [1 mark]

Answer _____

8 The cost of one CD and one DVD is £22

A DVD is £4 more expensive than a CD.

Work out the cost of a CD and a DVD.

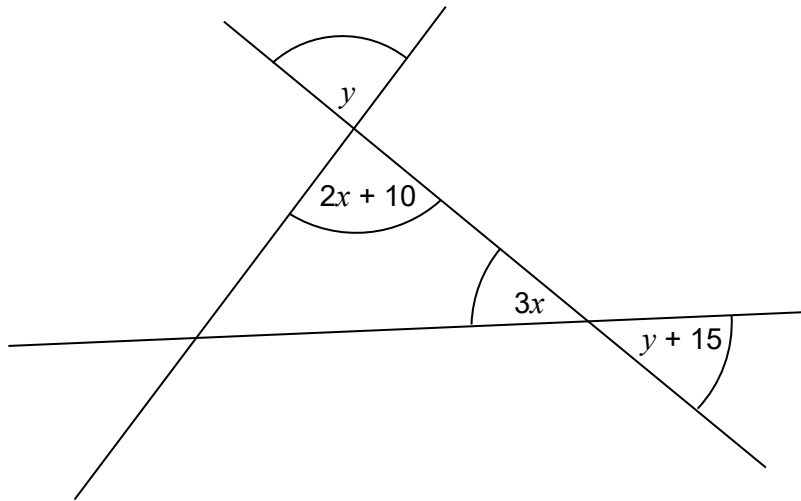
[4 marks]

CD = £ _____

DVD = £ _____

9 Here are three intersecting lines.

All angles are in degrees.



Not drawn
accurately

Work out the value of x .

[3 marks]

$x =$ _____