

7.3 Answers

GCSE Mathematics Simultaneous Equations III

7.3.1 Solutions (7.2 Exercise)

Answer 1

(a) $x = -1.5$

(b) $y = 30$

Answer 2

$x < 1.5$

Answer 3

(a) $5n + 30$

(b) y^6

(c) 2.75

Answer 4

(a) $4x - 19$

(b) $y^2 + 11y + 24$

(c) $5p^3 + 4p$

Answer 5

(a) $3\frac{2}{3}$

(b) -0.5

Answer 6

(2, 4), (5, 25)

Answer 7

$5\frac{1}{3}$

Answer 8

$x = 2, x = 6$

Answer 9

$(x - 3)(x - 5)$

Answer 10

(a) $(2x - 3)(x + 1)$

(b) $x = 1, x = \frac{3}{2}$

Answer 11

$y = 4$

Answer 12

(a) $5w + 9$

(b) $x = 22$

(c) $y < 1.2$

Answer 13

$p^2 + 3p - 28$

Answer 14

(a) $n(n - 4)$

(b) $x = 1.2$

Answer 15

(a) $p(p + 7)$

(b) $x = 0.4$

(c) t^9

(d) $2y$

Answer 16

$(2x + 3)(x + 1)$

Answer 17

(a) $5x - 10$

(b) $x = 28$

(c) $x > 1.6$

Answer 18

$x = 11$

Answer 19

(a) $5(x - 4)$

(b) $y(y + 6)$

Answer 20

$12x^2 + x - 35$

Answer 21

(a) $x(3x - 2)$

(b) $y^4 - 4y^3$

(c) $t = 2.5$

Answer 22

(a) $x = 5$

(b) $y = -10, y = 12$

Answer 23

$(3x - 1)(x - 4)$

Answer 24

$$y = 2x + 1$$

$$x^2 + y^2 = 13$$

Substitute the equation of the line into the equation of the circle to get,

$$x^2 + (2x + 1)^2 = 13$$

$$x^2 + 4x^2 + 4x + 1 = 13$$

$$5x^2 + 4x - 12 = 0$$

$$x^2 + \frac{4}{5}x - \frac{12}{5} = 0$$

A	B
$-\frac{6}{5}$	$2 = \frac{10}{5}$

<===

$$\left(x - \frac{6}{5}\right)(x + 2) = 0$$

$$\text{Either } x = \frac{6}{5} \text{ or } x = -2$$

Now use $y = 2x + 1$ to get $(-2, -3)$ $(1.2, 3.4)$