

1. Solve the following simultaneous equations

(a) $2x - y = 7$ and $3x + y = 3$ [2]

(b) $x + 5y = 22$ and $x + 3y = 12$ [2]

(c) $3x + 4y = 14$ and $5x + 2y = 21$ [3]

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(d) $2x + 3y = 13$ and $x + 2y = 9$ [3]

(e) $\frac{2x + y}{2} = 7$ and $\frac{2x - y}{2} = 17$ [3]

(f) $2x + y = 5$ and $2y = x - 10$ [3]

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(g) $0.4x - 5y = 27$ and $2x + 0.2y = 9$ [3]

(h) $2x + \frac{1}{2}y = 13$ and $3x + 2y = 17$ [3]

(i) $\frac{1}{2}x + y = 8$ and $x - 2y = 2$ [3]

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(j) $5x + 8y = 4$ and $\frac{1}{2}x + 3y = 7$ [3]

(k) $y = x / 2$ and $2x - y = 1$ [3]

(l) $2x + 3y = -12$ and $5x + 2y = 14$ [4]

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(m) $5x + 2y = -2$ and $3x - 5y = 17.4$ [4]

2. Solve the following simultaneous equations

(a) $y = x^2 - 5x + 7$ and $y = 2x + 1$ [5]

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(b) $y = x^2 - 3x + 4$ and $y - x = 1$ [5]

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(c) $3x + y = 11$ and $x^2 - 2y = 18$ [5]



(d) $x - y = 7$ and $x^2 + y = 149$ [5]

(e) $6x + y = 10$ and $y = x^2 - 3x + 10$ [5]

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(f) $y = x + 1$ and $y = x^2 - 3x - 11$ [4]

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Answers

1. a) 2 & –3 b) –3 & 5 c) 4 & 1/2 d) –1 & 5 e) 12 & –10
   f) 4 & –3 g) 5 & –5 h) 7 & –2 i) 9 & 3.5 j) –4 & 3
   k) 2/3 & 1/3 l) 6 & –8 m) 4/5 & –3

2. (a) $x = 1, y = 3$ and $x = 6, y = 13$ (b) $x = 1, y = 2$ and $x = 3, y = 4$
   (c) $x = 4, y = -1$, $x = -10, y = 41$ (d) $x = 12, y = 5$ *and* $x = -13$, $y = -20$
   (e) $x = 0$, $y = 28$ *and* $x = -3$, $y = 10$ (f) $x = -2, y = -1$ and $x = 6$ *and* $y = 7$

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