



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]



(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]



(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]



(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]



(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]

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



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

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(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]

**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  $y = 7$