

Simultaneous Equations

Workout

Question 1:

(a) $x=2$
 $y=6$

(b) $x=1$
 $y=3$

(c) $x=3$
 $y=2$

(d) $x=15$
 $y=6$

(e) $x=5$
 $y=6$

(f) $x=3$
 $y=0.5$

(g) $x=4$
 $y=1$

(h) $x=23$
 $y=5$

(i) $x=2.5$
 $y=11$

(j) $x=9$
 $y=2$

(k) $x=30$
 $y=15$

(l) $x=18$
 $y=5$

(m) $x=14$
 $y=6$

(n) $x=40$
 $y=50$

(o) $x=-3$
 $y=4$

(p) $x=-4$
 $y=-1$

(q) $x=20$
 $y=-9$

(r) $x=0$
 $y=4$

Question 2:

(a) $x=5$
 $y=4$

(b) $x=5$
 $y=2$

(c) $x=4$
 $y=9$

(d) $x=11$
 $y=10$

(e) $x=7.5$
 $y=3.5$

(f) $x=7$
 $y=1$

(g) $x=10$
 $y=20$

(h) $x=7$
 $y=3$

(i) $x=19$
 $y=5$

(j) $x=4$
 $y=8$

(k) $x=-2$
 $y=2$

(l) $x=3$
 $y=-6$

(m) $x=-3$
 $y=1$

(n) $x=-2$
 $y=-3$

(o) $x=6$
 $y=2$

(p) $x=1$
 $y=-1$

(q) $x=10$
 $y=-3$

(r) $x=-2$
 $y=-20$

Question 3:

(a) $x=5$
 $y=2$

(b) $x=-4$
 $y=3$

(c) $x=2$
 $y=4$

$$\begin{aligned} \text{(d)} \quad x &= 8 \\ y &= 2 \end{aligned}$$

$$\begin{aligned} \text{(e)} \quad x &= -1 \\ y &= 5 \end{aligned}$$

$$\begin{aligned} \text{(f)} \quad x &= -4 \\ y &= 2 \end{aligned}$$

$$\begin{aligned} \text{(g)} \quad x &= 5 \\ y &= 2 \end{aligned}$$

$$\begin{aligned} \text{(h)} \quad x &= 2.5 \\ y &= 1 \end{aligned}$$

$$\begin{aligned} \text{(i)} \quad x &= 11 \\ y &= 10 \end{aligned}$$

$$\begin{aligned} \text{(j)} \quad x &= 9 \\ y &= 9 \end{aligned}$$

$$\begin{aligned} \text{(k)} \quad x &= -8 \\ y &= 3 \end{aligned}$$

$$\begin{aligned} \text{(l)} \quad x &= 6 \\ y &= 2 \end{aligned}$$

$$\begin{aligned} \text{(m)} \quad x &= 9 \\ y &= 5 \end{aligned}$$

$$\begin{aligned} \text{(n)} \quad x &= 2 \\ y &= -7 \end{aligned}$$

$$\begin{aligned} \text{(o)} \quad x &= 6 \\ y &= 4 \end{aligned}$$

$$\begin{aligned} \text{(p)} \quad x &= 3 \\ y &= -1 \end{aligned}$$

$$\begin{aligned} \text{(q)} \quad x &= 3 \\ y &= -3 \end{aligned}$$

$$\begin{aligned} \text{(r)} \quad x &= 8 \\ y &= -1 \end{aligned}$$

Question 4:

$$\begin{aligned} \text{(a)} \quad x &= 7 \\ y &= 3 \end{aligned}$$

$$\begin{aligned} \text{(b)} \quad x &= 6 \\ y &= 2 \end{aligned}$$

$$\begin{aligned} \text{(c)} \quad x &= 8 \\ y &= -2 \end{aligned}$$

$$\begin{aligned} \text{(d)} \quad x &= 10 \\ y &= 4 \end{aligned}$$

$$\begin{aligned} \text{(e)} \quad x &= -2 \\ y &= 22 \end{aligned}$$

$$\begin{aligned} \text{(f)} \quad x &= 4 \\ y &= -15 \end{aligned}$$

Apply

Question 1: Coffee is £2.50 Tea is £1.50

Question 2: Rosemary is 77 Hannah is 25

Question 3: Adult ticket is £9.50 Child ticket is £3.50

Question 4: £765

Question 5: £80

Question 6: 120 rulers and 80 pens

Question 7: £4.20

Question 8:

$$\begin{array}{l} 3x + 5y = 1 \quad \times 2 \\ 2x - 3y = 7 \quad \times 3 \end{array}$$

Do not use trial and improvement

$$\begin{array}{r} 6x + 10y = 2 \\ - \quad 6x - 9y = 21 \\ \hline 19y = 23 - 19 \\ y = 1.21 \\ -1 \end{array}$$

Using $y=-1$ you would then find that $x=2$