

1. make  $x$  the subject in each case:

(a)  $4y + 7 = 11 + x$       (b)  $x - 7y = 13$       (c)  $12 + 3x = 14y + 4x$

(d)  $11 + 5x = 13y + 4x$       (e)  $5x - 2y = 9 + 4x$       (f)  $x - 6y = 15$

2. make  $y$  the subject in each case:

(a)  $2x - y = 5$       (b)  $p - 2y = 5 - q - 3y$       (c)  $\frac{p}{4} = \frac{y}{2}$

(d)  $p - y = 5 - q$       (e)  $4y = 9 - x + 3y$       (f)  $4y + 7 = 3y + 11 + 2x$

3. make  $a$  the subject in each case:

(a)  $4b + 2c = a - b$       (b)  $7a + 2p = 8a - 3$       (c)  $5p = q - a$

(d)  $2p = 3 - a - q$       (e)  $3 - a - q = b$       (f)  $5q = 2b + a$

4. make  $p$  the subject in each case:

(a)  $2b + p - y = 5 - q$       (b)  $p - q = 4 - a + 2p$       (c)  $2p = 3p - 4 - a$

(d)  $p - 5 = 2p - q$       (e)  $3 - 5q = a - p$       (f)  $3 - 2p = q - p$

5. make  $x$  the subject in each case:

(a)  $q - 7a - 2x = 5 - x$       (b)  $3xa = 5yb$       (c)  $7ya = 2xb$

(d)  $3ya^2 = 5xc$       (e)  $5a^2 = \frac{3xb}{c}$       (f)  $b^2z = \frac{2a}{3xc}$

1. make  $x$  the subject in each case:

(a)  $x = 4y - 4$

(b)  $x = 13 + 7y$

(c)  $x = 12 - 4y$

(d)  $x = 13y - 11$

(e)  $x = 2y + 9$

(f)  $x = 15 + 6y$

2. make  $y$  the subject in each case:

(a)  $y = 2x - 5$

(b)  $y = 5 - q - p$

(c)  $y = \frac{p}{2}$

(d)  $y = p - 5 + q$

(e)  $y = 9 - x$

(f)  $y = 11 + 2x - 7$

3. make  $a$  the subject in each case:

(a)  $a = 5b + c$

(b)  $a = 2p + 3$

(c)  $a = q - 5p$

(d)  $a = 3 - 2p - q$

(e)  $a = 3 - q - b$

(f)  $a = 5q - 2b$

4. make  $p$  the subject in each case:

(a)  $p = 5 - q + y - 2b$

(b)  $p = 4 - a + q$

(c)  $p = 4 + a$

(d)  $p = q - 5$

(e)  $p = a + 5q - 3$

(f)  $p = 3 - q$

5. make  $x$  the subject in each case:

(a)  $x = q - 7a - 5$

(b)  $x = \frac{5yb}{3a}$

(c)  $x = \frac{5ya}{3b}$

(d)  $x = \frac{5ya^2}{5c}$

(e)  $x = \frac{5a^2c}{3b}$

(f)  $x = \frac{2a}{3b^2c}$