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) $\dfrac{p}{4} = \dfrac{y}{2}$

(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) $5a^2 = \dfrac{3xb}{c}$ (f) $b^2z = \dfrac{2a}{3xc}$

1. make x the subject in each case:

(a) $x = 4y - 4$

(b) $x = 13 + 7y$

(c) $x = 12 - 14y$

(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) $y = \dfrac{p}{2}$

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

(e) $y = 9 - x$

(f) $y = 2x + 4$

3. make a the subject in each case:

(a) $a = 5b + 2c$

(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) $p = a - q - 4$

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

(c) $x = \dfrac{7ya}{2b}$

(d) $x = \dfrac{3ya^2}{5c}$

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

(f) $x = \dfrac{2a}{3b^2 cz}$