

Workout

Question 1: Make  $x$  the subject of each of the following

(a)  $A = \frac{1}{2}(x + y)$

(b)  $A = \pi r^2 + 2\pi r x$

(c)  $T = 3x^2 - y$

(d)  $s = \frac{m}{ax}$

(e)  $s = uy + \frac{1}{2}xy^2$

(f)  $\frac{1}{3}w = \frac{1}{4}x + t$

(g)  $j = \frac{x + 3}{d}$

(h)  $g = \frac{t}{x - 2}$

(i)  $p = 3(y + 2x)^2$

(f)  $12w = \frac{3}{4}(2x + a)$

Question 2: Make  $m$  the subject of the following formulae

(a)  $5(m + y) = 4(m - 3y)$

(b)  $3(3m + 4) = 7(m + 2a)$

(c)  $15(2m + 3c) = 5(m + 7c)$

(d)  $9m + 4c = 2(a + 3m)$

(e)  $a(c + m) = 2(c + 3m)$

(f)  $w(m + n) = x(m - n)$

(g)  $8 = \frac{m + 3c}{m - f}$

(h)  $y = \frac{m + 4}{m + 5}$

(i)  $y = 3mt - a^2m$

(j)  $r(c + 7) = 3m + 5$

(k)  $x = 4\pi m + am$

(l)  $2 = \frac{m + k}{m - t}$

(m)  $dm = y - em$

(n)  $m(c + d) = m + f$

(o)  $y - mp = np + 2y$

(p)  $m(r + p) = r(h - m)$

(q)  $\pi x = \frac{m + 8}{m - 1}$

(r)  $\frac{3m + 2}{c} = \frac{m + 1}{a}$

Question 3: Make  $c$  the subject of the following

(a)  $w = \frac{ac}{a - c}$

(b)  $w = 6 + \frac{a}{c + 2}$

Apply

Question 1: The cosine rule is  $a^2 = b^2 + c^2 - 2bc \cos A$ .  
Make  $\cos A$  the subject.