

# National 5: Changing the Subject

Transpose each formula to make  $x$  the subject.

**Q1** a)  $t = x + y$

b)  $b = x - a$

c)  $d = x - 2c$

d)  $e = -x$

e)  $f = g + x$

f)  $y = 3x$

g)  $a = bx$

h)  $y = abx$

i)  $n = \frac{x}{a}$

j)  $y = x^2$

k)  $g = \sqrt{x}$

l)  $\frac{x}{a} = b + c$

m)  $y = xa^2$

n)  $\sqrt{x} = pq$

o)  $A = \sqrt[3]{x}$

**Q2** a)  $t = 2x + y$

b)  $b = ux - a$

c)  $\frac{x}{a} + 2u = v$

d)  $\frac{x}{n} - de = 3f$

e)  $j = h + ix$

f)  $y + ax = b$

g)  $a = y - bx$

h)  $n = \frac{gx}{a}$

i)  $b = \frac{a}{x}$

j)  $y = ax^2$

k)  $y = x^3a^2$

l)  $n = \frac{x^2}{a}$

m)  $R = h\sqrt{x}$

n)  $t = \frac{\sqrt{x}}{a}$

o)  $\frac{p}{\sqrt{x}} = q$

**Q3** a)  $p = \sqrt{x + d}$

b)  $Q = rx^2 - a$

c)  $n = \frac{\sqrt{x}}{e} - 2u$

d)  $g = x(a + b)$

e)  $g = ax + bx$

f)  $F = \sqrt{2x - y}$

g)  $y = \frac{1}{2}(x + 3)$

h)  $p = \sqrt{x^2 - 1}$

i)  $r = a\sqrt{x} + b$

j)  $s = ij + 2kx^2$

k)  $y = \frac{3}{4}x$

l)  $C = \frac{x + w^2}{d}$

m)  $L = \sqrt{4x - m}$

n)  $u = \frac{\sqrt{xy}}{w}$

o)  $T = \sqrt[3]{5x + d}$

p)  $y - b = m(x - a)$

q)  $A = \frac{x}{360}(\pi r^2)$

r)  $e^2 = f^2 + 2gx$

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

t)  $n + 2t = \frac{\sqrt{x}}{n}$

u)  $h = \frac{1}{4}g^2x^3 - v$