



REARRANGING FORMULAE

TWO-STEP PROBLEMS

Ref: G241. **2S1_b**

A1 Make a the subject of $x = 3a + b$	A2 Make b the subject of $x = a + bc$	A3 Make a the subject of $x = 3(a - 4)$	A4 Make b the subject of $x = \frac{ab}{2}$
B1 Make m the subject of $y = mx + c$	B2 Make r the subject of $p = \frac{q+r}{2}$	B3 Make h the subject of $m = r + h\sqrt{x}$	B4 Make L the subject of $N = 2\pi\sqrt{L}$
C1 Make y the subject of $A = \frac{y-2x}{3}$	C2 Make a the subject of $s = \frac{1}{2}a + 3b$	C3 Make h the subject of $F = \frac{1}{4}(h-g)$	C4 Make n the subject of $d = (mn)^2$
D1 Make b the subject of $M = \sqrt{3ab}$	D2 Make p the subject of $x = \sqrt{\frac{p}{qr}}$	D3 Make n the subject of $m = \sqrt{n-2p}$	D4 Make g the subject of $3h = \frac{\sqrt{g}}{e}$
E1 Make M the subject of $b = \left(\frac{M}{3n}\right)^2$	E2 Make h the subject of $w = \sqrt{h} - 2fg$	E3 Make k the subject of $Y = \frac{k^2}{5ab}$	E4 Make q the subject of $L = 4pq^2$



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Ref: G241. **2S1b**

<p>A1 Make a the subject of</p> $x = 3a + b \quad 3a = x - b$ $a = \frac{x - b}{3}$	<p>A2 Make b the subject of</p> $x = a + bc \quad bc = x - a$ $b = \frac{x - a}{c}$	<p>A3 Make a the subject of</p> $x = 3(a - 4) \quad a - 4 = \frac{x}{3}$ $a = \frac{x}{3} + 4$	<p>A4 Make b the subject of</p> $x = \frac{ab}{2} \quad ab = 2x$ $b = \frac{2x}{a}$
<p>B1 Make m the subject of</p> $y = mx + c \quad mx = y - c$ $m = \frac{y - c}{x}$	<p>B2 Make r the subject of</p> $p = \frac{q + r}{2} \quad q + r = 2p$ $r = 2p - q$	<p>B3 Make h the subject of</p> $m = r + h\sqrt{x} \quad h\sqrt{x} = m - r$ $h = \frac{m - r}{\sqrt{x}}$	<p>B4 Make L the subject of</p> $N = 2\pi\sqrt{L}$ $\sqrt{L} = \frac{N}{2\pi} \quad L = \left(\frac{N}{2\pi}\right)^2$
<p>C1 Make y the subject of</p> $A = \frac{y - 2x}{3} \quad y - 2x = 3A$ $y = 3A + 2x$	<p>C2 Make a the subject of</p> $s = \frac{1}{2}a + 3b \quad \frac{1}{2}a = s - 3b$ $a = 2(s - 3b)$	<p>C3 Make h the subject of</p> $F = \frac{1}{4}(h - g) \quad h - g = 4F$ $h = 4F + g$	<p>C4 Make n the subject of</p> $d = (mn)^2 \quad mn = \sqrt{d}$ $n = \frac{\sqrt{d}}{m}$
<p>D1 Make b the subject of</p> $M = \sqrt{3ab} \quad 3ab = M^2$ $b = \frac{M^2}{3a}$	<p>D2 Make p the subject of</p> $x = \sqrt{\frac{p}{qr}} \quad \frac{p}{qr} = x^2$ $p = qrx^2$	<p>D3 Make n the subject of</p> $m = \sqrt{n - 2p} \quad n - 2p = m^2$ $n = m^2 + 2p$	<p>D4 Make g the subject of</p> $3h = \frac{\sqrt{g}}{e} \quad \sqrt{g} = 3eh$ $g = (3eh)^2$
<p>E1 Make M the subject of</p> $b = \left(\frac{M}{3n}\right)^2 \quad \frac{M}{3n} = \sqrt{b}$ $M = 3n\sqrt{b}$	<p>E2 Make h the subject of</p> $w = \sqrt{h} - 2fg \quad \sqrt{h} = w + 2fg$ $h = (w + 2fg)^2$	<p>E3 Make k the subject of</p> $Y = \frac{k^2}{5ab} \quad k^2 = 5abY$ $k = \sqrt{5abY}$	<p>E4 Make q the subject of</p> $L = 4pq^2 \quad q^2 = \frac{L}{4p}$ $q = \sqrt{\frac{L}{4p}}$