

Workout

Question 1: Make y the subject of each of the following

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|-----------------------|------------------------|----------------------|
| (a) $y + w = c$ | (b) $y - p = m$ | (c) $m + y = s$ |
| (d) $y - 2g = n$ | (e) $3y = c$ | (f) $ay = w$ |
| (g) $\frac{y}{c} = w$ | (h) $\frac{y}{a} = 2c$ | (i) $a = y + p$ |
| (j) $c = y - k$ | (k) $y^2 = s$ | (l) $y^3 = x$ |
| (m) $\sqrt{y} = g$ | (n) $\pi y = c$ | (o) $n - y = t$ |
| (p) $ry = c$ | (q) $4\pi y = b$ | (r) $y + 7t = c + r$ |
| (s) $\frac{r}{y} = w$ | (t) $y^2 = k + x$ | (u) $A = xy$ |

Question 2: Make x the subject of the following formulae

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|---------------------------|---------------------------------------|---------------------------------|
| (a) $4x + c = w$ | (b) $dx - t = 8$ | (c) $x^2 + 3 = h$ |
| (d) $2x + 2y = P$ | (e) $\frac{s}{\frac{x}{6}} = v^2 - 2$ | (f) $y = xz + s$ |
| (g) $\frac{x}{n} + 2 = w$ | (h) $\frac{s}{6} - 5 = w$ | (i) $\frac{x+3}{c} = h$ |
| (j) $3y = 4x + 1$ | (k) $x^2 + a = v$ | (l) $x^3 - 4 = 5y$ |
| (m) $\frac{x+t}{m} = 2c$ | (n) $\frac{w+x}{u} = 3z$ | (o) $A = \pi x^2$ |
| (p) $A = \frac{1}{2}bx$ | (q) $V = abx$ | (r) $v^2 = u^2 + 2ax$ |
| (s) $\frac{a+b}{x} = r$ | (t) $\frac{5cx}{b} = a$ | (u) $\sqrt[3]{\frac{x}{k}} = w$ |

Question 3: Make c the subject of the following

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|---------------------|------------------|---------------------|
| (a) $(a + c)^2 = t$ | (b) $v = u + ac$ | (c) $v = \pi c^2 h$ |
|---------------------|------------------|---------------------|

Apply

Question 1: The circumference of a circle is given as $c = 2\pi r$
Make the radius, r , the subject of the formula.

Question 2: The formula to convert degrees Fahrenheit to degree Celsius is $\frac{5}{9}(F - 32) = C$

Find the formula to convert from degrees Celsius to degrees Fahrenheit by making F the subject.

Question 3: Can you spot any mistakes below?

Make y the subject of the formula:

$$k = y^2 + a$$

$$\sqrt{k} = y + a$$

$$\sqrt{k} - a = y$$

$$y = \sqrt{k} - a$$

Express v in terms of t

$$t = \frac{v}{4} + 1$$

$$t - 1 = \frac{v}{4}$$

$$\frac{t - 1}{4} = v$$