

Rearranging Harder Formulae

Make x the subject of each of the formulae.

(a)	(b)	(c)	(d)
$a = b + x^2$ $x = \sqrt{a - b}$	$a^2 = b^2 + x^2$ $x = \sqrt{a^2 - b^2}$	$b = \frac{x^3}{2a}$ $x = \sqrt[3]{2ab}$	$b = 2a + \sqrt{x}$ $x = (b - 2a)^2$
(e)	(f)	(g)	(h)
$b = \sqrt{\frac{x}{a}}$ $x = ab^2$	$a + 5 = \sqrt{\frac{x}{b}}$ $x = b(a + 5)^2$	$ax = x + 5$ $x = \frac{5}{a - 1}$	$ax + b = a + x$ $x = \frac{a - b}{a - 1}$
(i)	(j)	(k)	(l)
$a = \frac{x}{x + 1}$ $x = \frac{a}{1 - a}$	$a(x - b) = bx$ $x = \frac{ab}{a - b}$	$b = \frac{x + a}{x - a}$ $x = \frac{a(b + 1)}{b - 1}$	$a = \sqrt{\frac{x}{x + b}}$ $x = \frac{ba^2}{1 - a^2}$