

Solutions to Past Paper Questions – Changing the subject of a formula

16) $y = \frac{x}{a-x}$

Multiply both sides by $(a-x)$: $y(a-x) = x$

Multiply out bracket: $ay - xy = x$

Get all terms containing x onto one side: $ay = x + xy$

Factorize so that x only appears once: $ay = x(1+y)$

Divide by the bracket to leave x as subject: $\frac{ay}{1+y} = x$

16) $4(x-2) = y(3-5x)$

$4x - 8 = 3y - 5xy$

$4x + 5xy = 3y + 8$

$x(4+5y) = 3y + 8$

$x = \frac{3y+8}{4+5y}$

$v = u + 10t$

6) $v - u = 10t$

$\frac{v-u}{10} = t$

13) $4y = k(2 - 3y)$

(Multiply out bracket) $4y = 2k - 3ky$

(Get all 'y's on LHS) $4y + 3ky = 2k$

(Factorise) $y(4 + 3k) = 2k$

(Divide) $y = \frac{2k}{4+3k}$