Algebra 1

chapter 1

$A = \pi r^2$ $\quad r = \sqrt{\frac{A}{\pi}}$

Section 1.6 Manipulating formulae

$A = LB$ $\quad \frac{A}{L \times B}$ $\quad B = \frac{A}{L}$ $\quad L = \frac{A}{B}$

subject

PROJECT MATHS Text & Tests 6

Example 1

(i) If $v^2 = u^2 + 2as$, express a in terms of v, u and s.

(ii) If $\sqrt{\frac{x+y}{x-y}} = \frac{1}{2}$, express y in terms of x. Hence find the value of y when $x = 5$.

(i)

$u^2 + 2as = v^2$

$-u^2$

$2as = v^2 - u^2$

$\div 2s$

$a = \frac{v^2 - u^2}{2s}$

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square

$\frac{x+y}{x-y} = \frac{1}{4}$

LCD $= 4(x-y)$

$4(x-y)\frac{(x+y)}{(x-y)} = 4(x-y)\frac{1}{4}$

expand

$4x + 4y = x - y$

$+y, -4x$

$5y = -3x$

$\div 5$

$y = \frac{-3}{5}x$

$x = 5, \; y = \frac{-3}{5}(5) = -3$