

Change the subject of a formula with Powers

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Name: _____



Make x the subject of the formula:

a) $y = \sqrt{x}$

$$x = y^2$$

c) $a = x^3$

$$x = \sqrt[3]{a}$$

e) $w = \sqrt[3]{x}$

$$x = w^3$$

b) $t = x^2$

$$x = \sqrt{t}$$

d) $\sqrt{x} = y$

$$x = y^2$$

f) $u = x^5$

$$x = \sqrt[5]{u}$$

Make x the subject of the formula:

g) $y = x^2 - 3$

$$x = \sqrt{y + 3}$$

j) $y = x^2 + 6$

$$x = \sqrt{y - 6}$$

h) $t = 5x^2$

$$x = \sqrt{\frac{t}{5}}$$

k) $y = 3x^2 + 1$

$$x = \sqrt{\frac{y - 1}{3}}$$

i) $y = \frac{x^2}{7}$

$$x = \sqrt{7y}$$

l) $a = cx^2 - b$

$$x = \sqrt{\frac{a + b}{c}}$$

Make x the subject of the formula:

m) $4y^2 = x^2$

$$x = 2y$$

p) $42y^2 = x^2 - 6y^2$

$$x = \sqrt{48y}$$

n) $100t^2 = 4x^2$

$$x = 5t$$

q) $y = \frac{\sqrt{x}}{2}$

$$x = 4y^2$$

o) $7y^2 = \frac{x^2}{7}$

$$x = 7y$$

r) $a = 5\sqrt{x}$

$$x = \frac{a^2}{25}$$

 Exam style question:

A is the area of the triangle

a) Show that $A = 36c^2$

Express c in terms of A (in its simplest form)

$$c = \frac{\sqrt{A}}{6}$$

