

M8 = 24 days to go!

6 Tom bought shares costing £4000

The value, V , of the shares depreciated by 0.05% each year.

Circle the formula which gives the value, V , of the shares after two years.

$$V = (4000 - 0.05)^2$$

$$V = 4000 (1.05)^2$$

$$V = 4000 (0.9995)^2$$

$$V = 4000 (0.95)^2$$

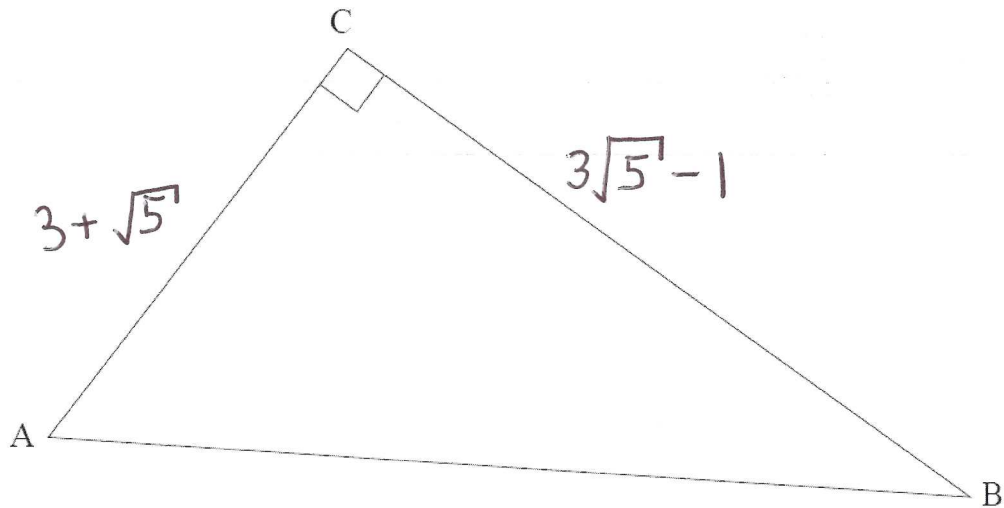
[1]

Multiplier must be less than 1

$$1 - 0.05\%$$
$$= 1 - 0.0005$$

$$= 0.9995$$

Formula $4000 \times (0.9995)^2$



$$BC = 3\sqrt{5} - 1 \text{ and } AC = 3 + \sqrt{5}$$

Find AB.

Give your answer in the form $p\sqrt{q}$

Pythagoras'
 $a^2 + b^2 = h^2$

$$(3 + \sqrt{5})^2 + (3\sqrt{5} - 1)^2 = AB^2$$

$$(3 + \sqrt{5})(3 + \sqrt{5}) + (3\sqrt{5} - 1)(3\sqrt{5} - 1) = AB^2$$

$$9 + 3\sqrt{5} + 3\sqrt{5} + 5$$

$$+ 45 - 3\sqrt{5} - 3\sqrt{5} + 1 = AB^2$$

[5]

$$60 = AB^2$$

$$AB = \sqrt{60}$$

$$AB = \sqrt{4} \times \sqrt{15}$$

$$AB = 2\sqrt{15}$$