

Question of the day

Day 9

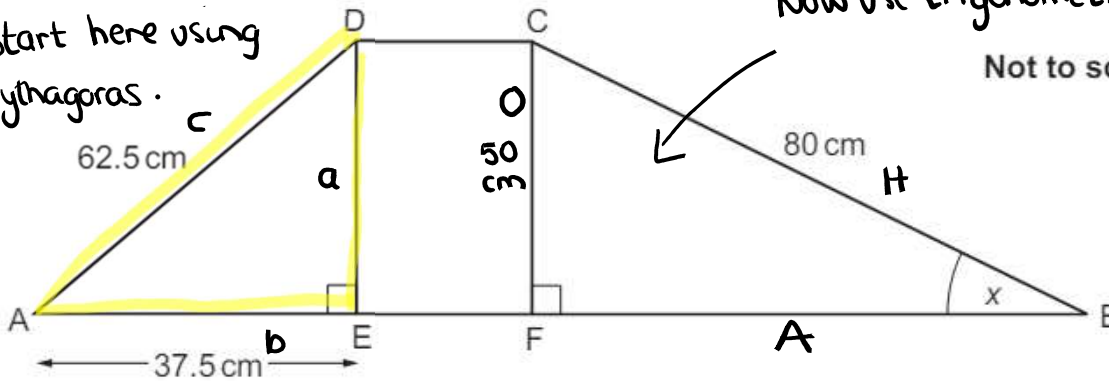
In the diagram below, ABCD is a trapezium.

Length AE is 37.5 cm.

DE = CF = 50 cm

Find the value of angle x.

Start here using
Pythagoras.



Now use trigonometry



Not to scale

$$x = \sin^{-1} \left(\frac{O}{H} \right)$$

$$x = \sin^{-1} \left(\frac{50}{80} \right)$$

$$x = 38.7^\circ \text{ to 1 dp}$$

$$a^2 + b^2 = c^2$$

$$a^2 + 37.5^2 = 62.5^2$$

$$a^2 = 62.5^2 - 37.5^2$$

$$a^2 = 2500$$

$$a = \sqrt{2500}$$

$$a = 50$$

$$x = \dots\dots\dots 39 \text{ to the nearest } \dots\dots\dots^\circ [6]$$

Foundation