

Righting

Theorem

Feb 28

Pythagorean Theorem

Used on right-angle triangles

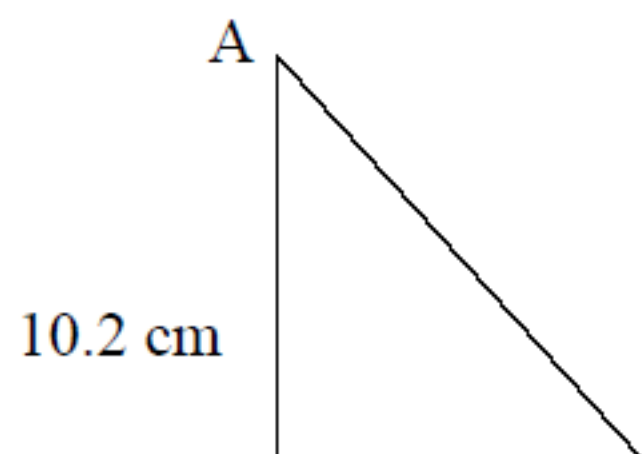
$a^2 + b^2 = c^2$ to multiply by itself



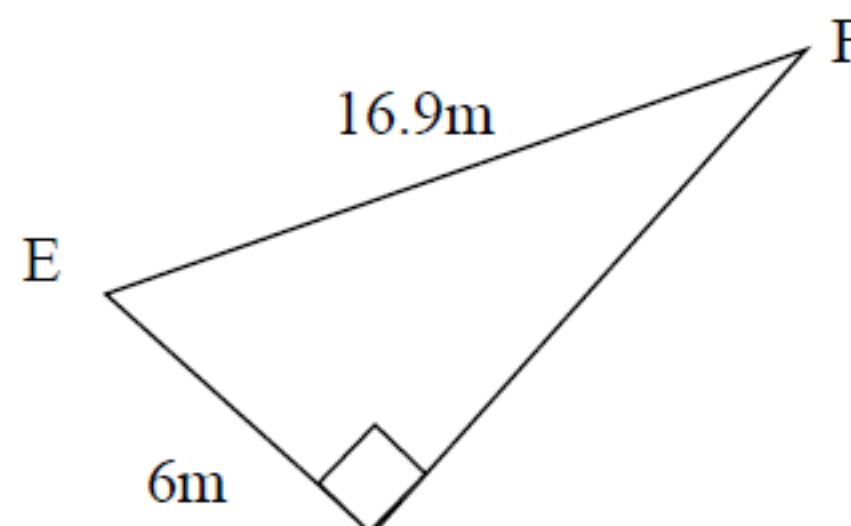
Your hypotenuse is always across from your right angle

Remember - Triangle angles always add up to 180 degrees.

Solve for c



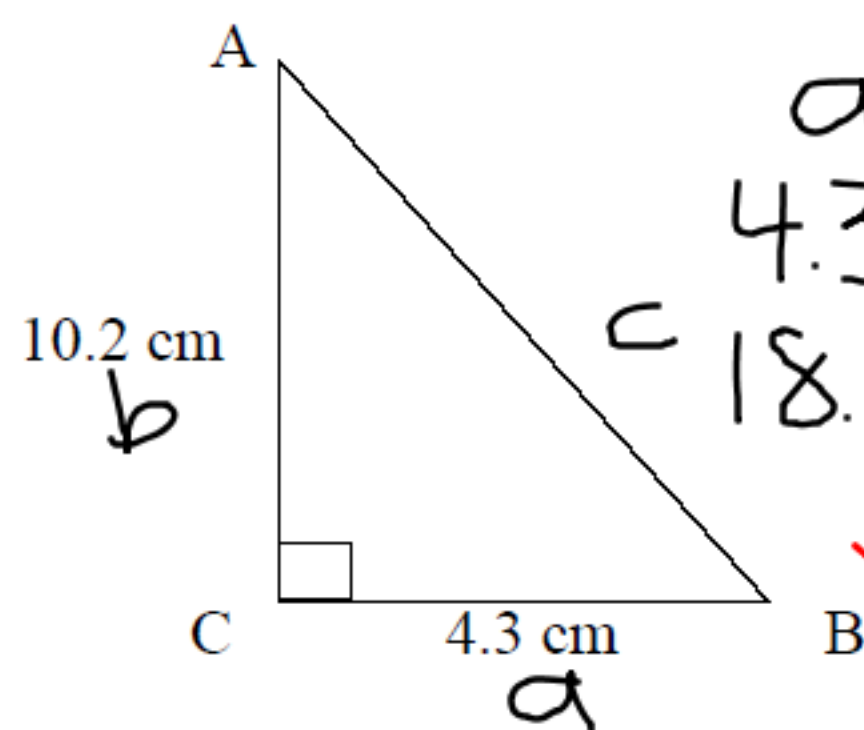
Solve for e



Uppercase Letters = angles
Lowercase Letters = sides

Solve for c

Solve for c



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

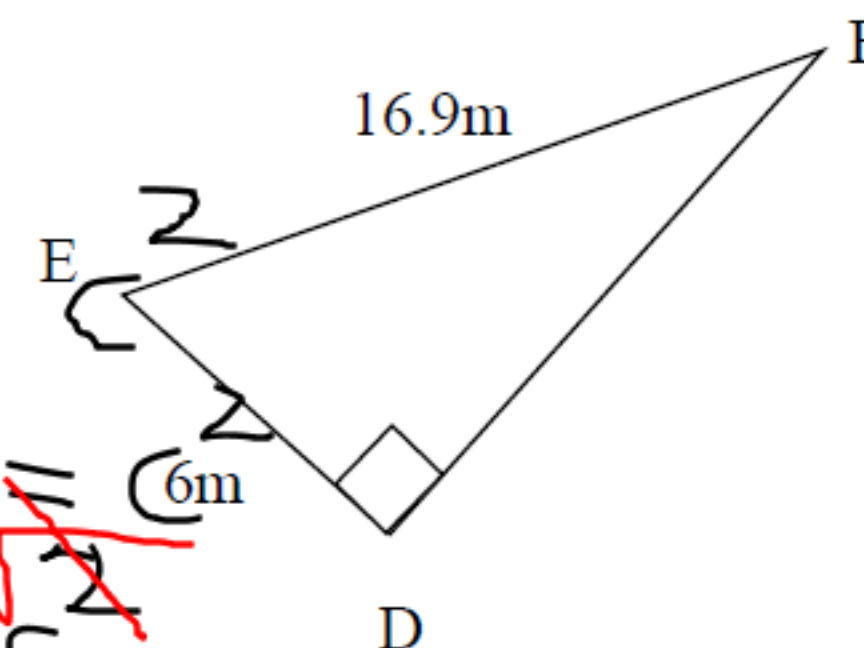
$$4.3^2 + 10.2^2 = c^2$$

$$18.49 + 104.04 = c^2$$

$$\sqrt{122.53} = c$$

$$11.07 = c$$

$$c = 11.1 \text{ cm}$$



Remember the biggest _____ corresponds with the biggest _____, and the smallest _____ corresponds with the smallest _____.

What do the letters in "SOHCAHTOA" represent?

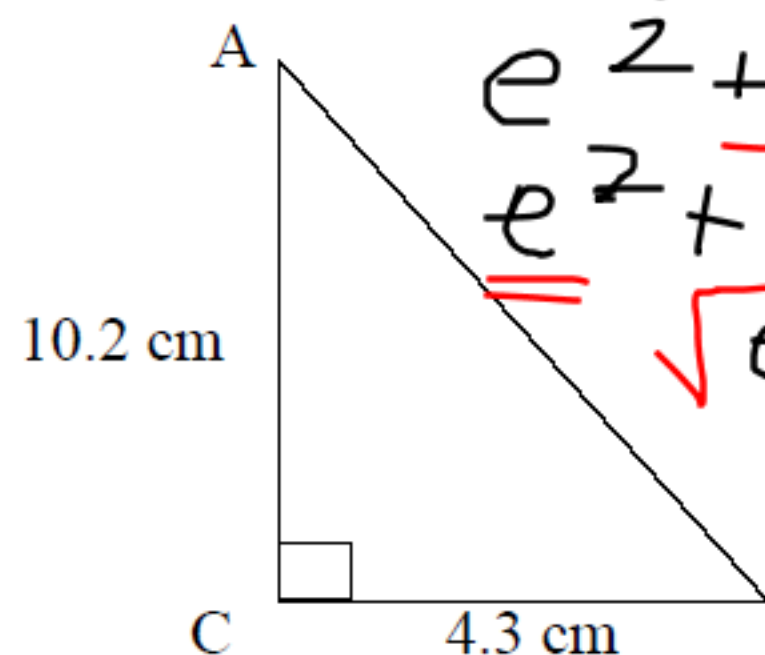
S = _____

O = _____

H = _____



Solve for c



$$e^2 + f^2 = d^2$$

$$e^2 + 6^2 = 16.9^2$$

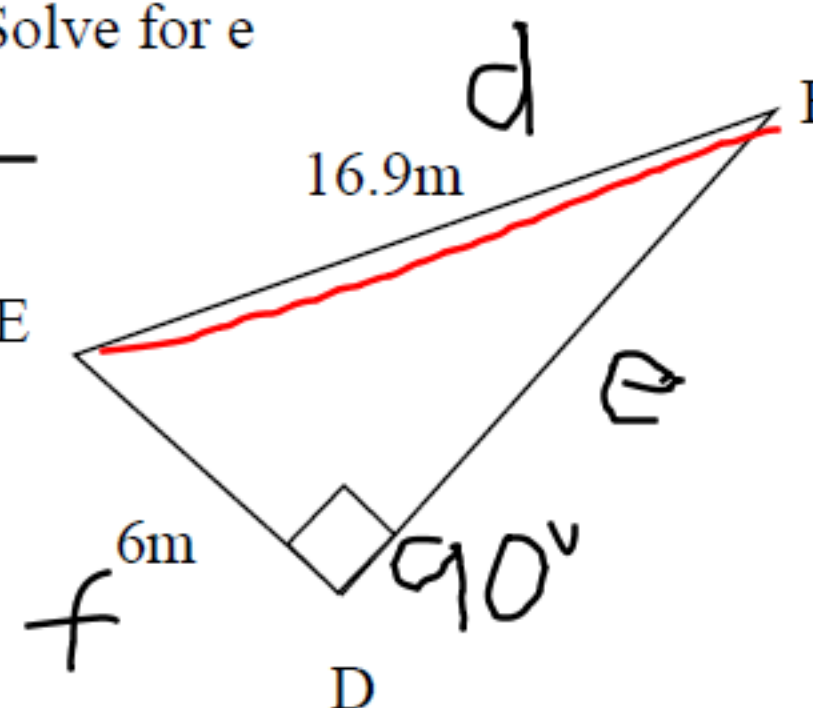
$$e^2 + 36 = 285.61$$

$$\sqrt{e^2} = \sqrt{249.61}$$

$$e = 15.79$$

$$e = 15.8m$$

Solve for e



Remember the biggest side corresponds with the biggest angle, and
the smallest side corresponds with the smallest angle.

What do the letters in "SOHCAHTOA" represent?

S = _____

O = _____

H = _____

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10) Do the following lengths form a right $\triangle$

$$a = 4.4$$

$$b = 11.7$$

$$c = 12.5$$

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

$$4.4^2 + 11.7^2 = 12.5^2$$

$$19.36 + 136.89 = 156.25$$

$$156.25 = 156.25$$



If the left side = the right side,
then your lengths form a right angle $\triangle$