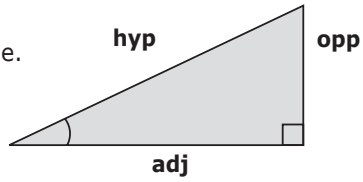
Trigonometry

Right angled triangles

Mark the angle you are going to use in the triangle.

Label the sides, in relation to the angle, opposite, adjacent and hypotenuse

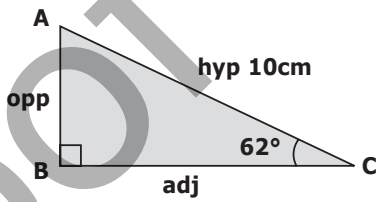


Now you must decide whether to use: sine (sin), cosine (cos) or tangent (tan). A phrase may help remember: SOH CAH TOA (sock a toa!)

Finding the length of a side

Find AB

- The given angle 62° is opp AB
- The given length is AC, the hypotenuse is 10cm
- Therefore use sin

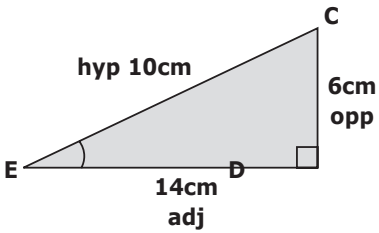


AB = sin 62° x hyp
AB = sin 62° x 10
AB = 8.83 to 2 d.p.

Finding the size of an angle

Find CÊD

- The given ED is adj to CÊD
- The given length CD is opp CÊD
- Therefore use tan

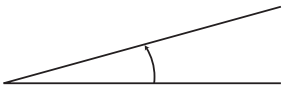


$$\tan C\hat{E}D = \frac{opp}{adj}$$

$$\tan C\hat{E}D = \frac{6}{14}$$

tan CÊD = 0.4286 (use $\tan^{-1}$ button on the calculator)
CÊD = 23.2°

Angle of elevation: From the horizontal looking up



Angle of depression: From the horizontal looking down