TRIANGLE REVIEW

- classifying by **SIDE LENGTH**

 equilateral

 isosceles

 scalene

- classifying by **ANGLE SIZE**

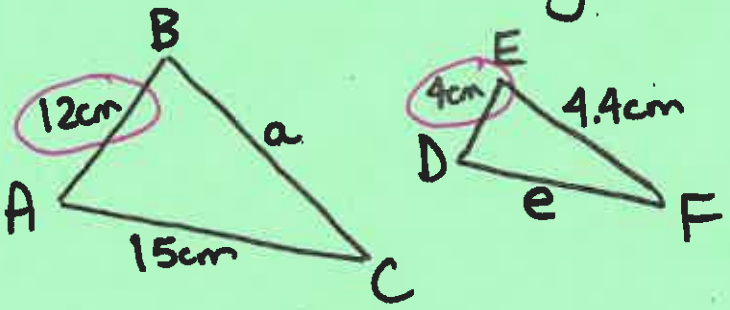
 acute (all angles $< 90°$) ← less than

 right (one angle $= 90°$)

 obtuse (one angle $> 90°$) ← greater than

- angles in a triangle always add up to $180°$

- similar triangles (same shape different size)



$\triangle ABC \sim \triangle DEF$

$\angle A = \angle D$
$\angle B = \angle E$
$\angle C = \angle F$

set up a proportion to find missing side lengths:

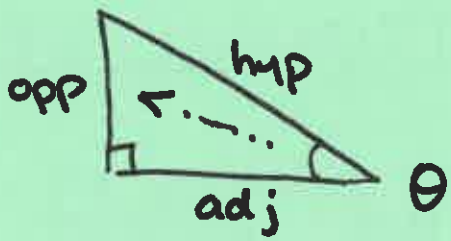
$\frac{12}{4} = \frac{a}{4.4}$

$a = 13.2\text{cm}$

$\frac{12}{4} = \frac{15}{e}$

$e = 5\text{cm}$.

- right triangles (Pythagoras and SOH CAH TOA)



* to find a side: $a^2+b^2=c^2$

OR

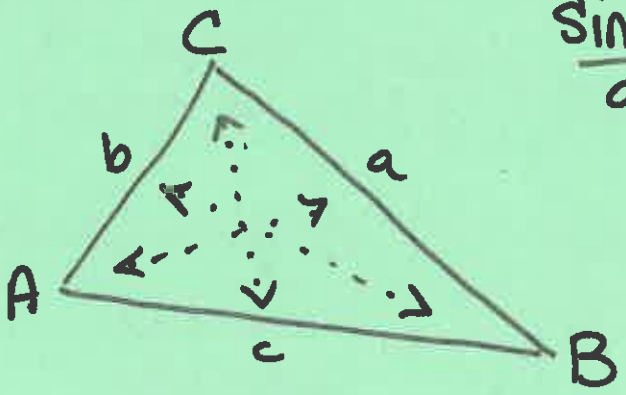
$\sin\theta=\frac{opp}{hyp}$ $\cos\theta=\frac{adj}{hyp}$ $\tan\theta=\frac{opp}{adj}$

* to find an angle: angles add to 180°

OR

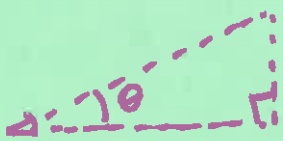
$\theta=\sin^{-1}\left(\frac{opp}{hyp}\right)$ $\theta=\cos^{-1}\left(\frac{adj}{hyp}\right)$ $\theta=\tan^{-1}\left(\frac{opp}{adj}\right)$

- sine law



$$\frac{\sin A}{a}=\frac{\sin B}{b}=\frac{\sin C}{c}$$

- angle of elevation looking up



- angle of depression looking down