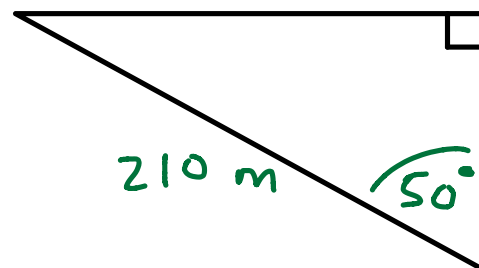
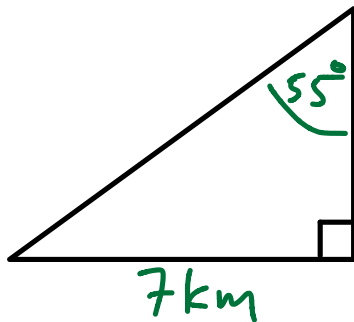
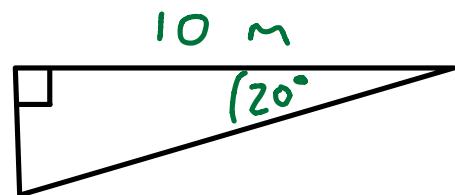
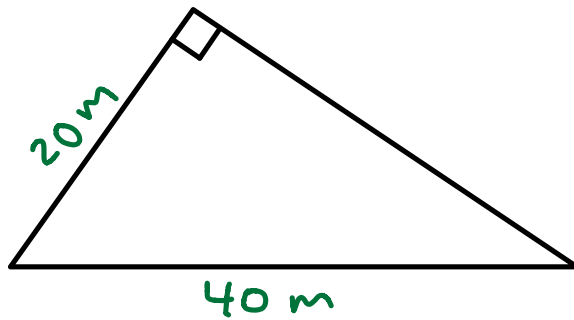
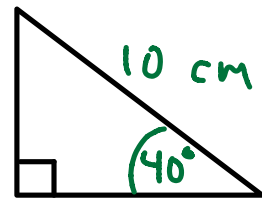
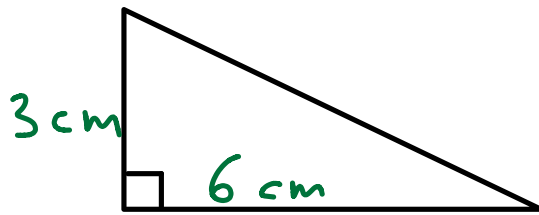
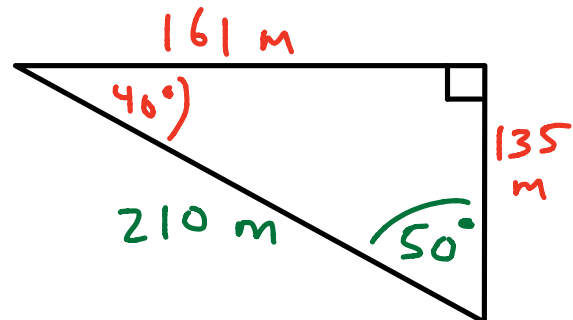
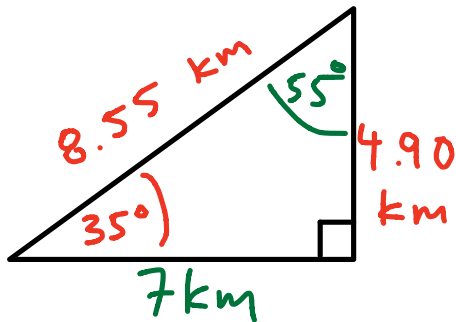
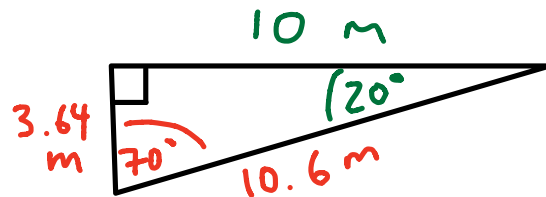
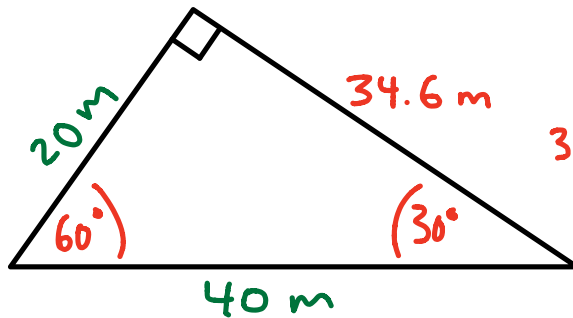
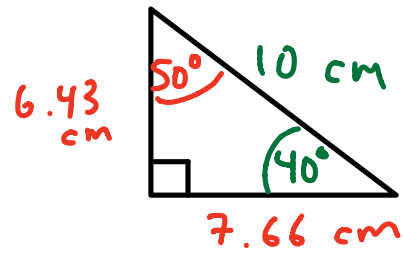
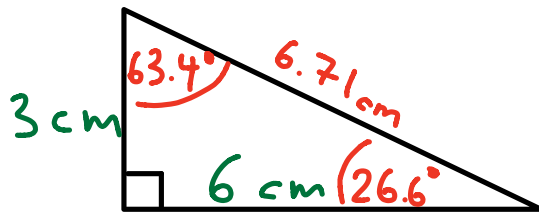
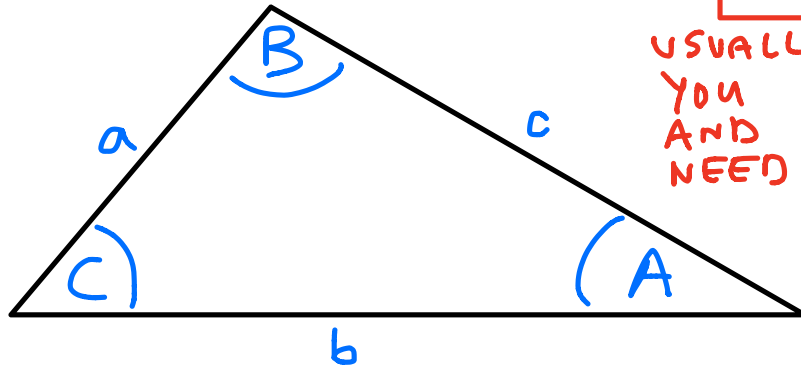


Solve for all unknown sides and angles in the right angle triangles.



Solve for all unknown sides and angles in the right angle triangles.





$$\text{cos law} \\ c^2 = a^2 + b^2 - 2ab \cos C$$

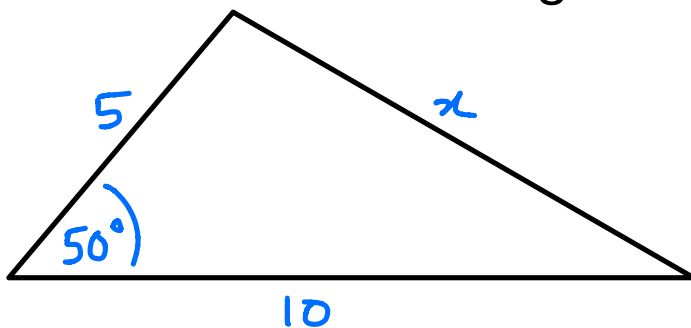
USUALLY USED WHEN
YOU KNOW 2 SIDES
AND AN ANGLE AND
NEED TO FIND THIRD SIDE

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

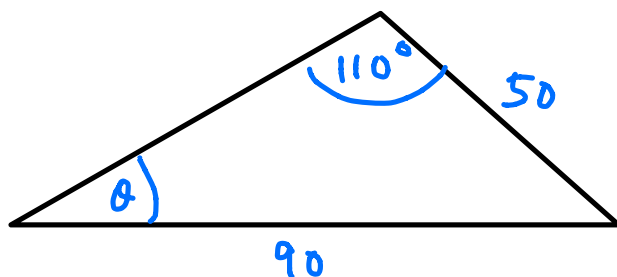
USED WHEN
YOU HAVE
SIDE/ANGLE
PAIRS

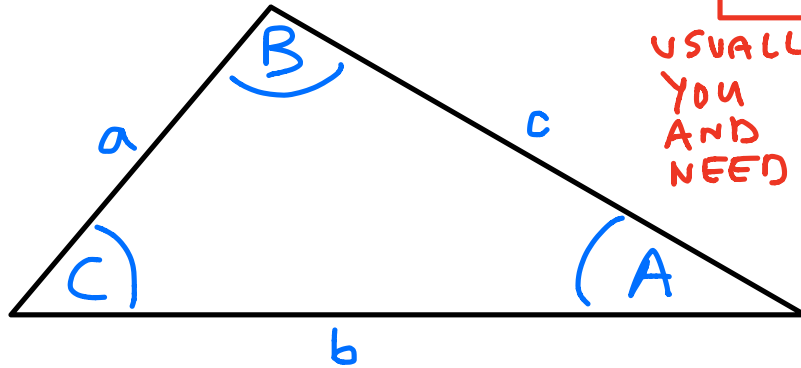
- A is the angle opposite of side a
- it doesn't matter what side you label a, b, c (i.e. there is no hypotenuse)

Determine the side length x.



Determine the angle θ .





cos law

$$c^2 = a^2 + b^2 - 2ab \cos C$$

USUALLY USED WHEN YOU KNOW 2 SIDES AND AN ANGLE AND NEED TO FIND THIRD SIDE

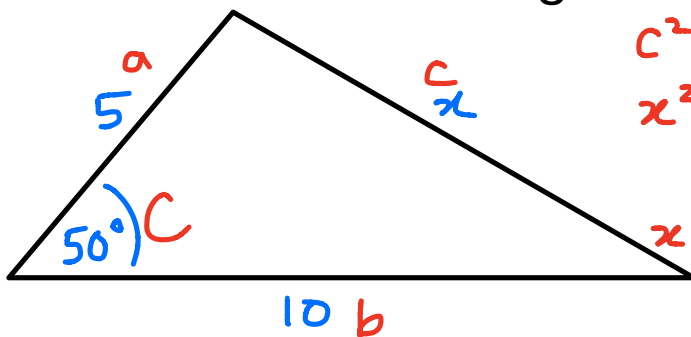
sin law

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

- A is the angle opposite of side a
- it doesn't matter what side you label a, b, c (i.e. there is no hypotenuse)

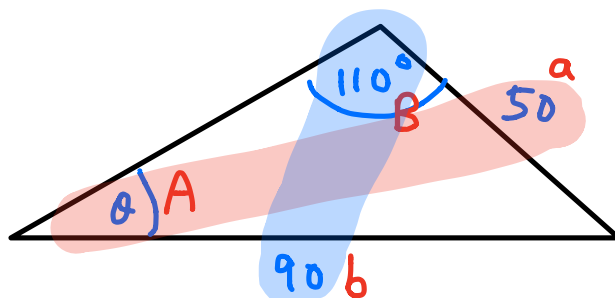
USED WHEN YOU HAVE SIDE/ANGLE PAIRS

Determine the side length x.



$$\begin{aligned} c^2 &= a^2 + b^2 - 2ab \cos C \\ x^2 &= (5)^2 + (10)^2 - 2(5)(10) \cos 50^\circ \\ &= 60.721 \\ x &= \sqrt{60.721} \\ &= \boxed{7.71} \end{aligned}$$

Determine the angle θ .



$$\begin{aligned} \frac{\sin A}{a} &= \frac{\sin B}{b} \\ \frac{\sin \theta}{50} &= \frac{\sin 110^\circ}{90} \\ \sin \theta &= \frac{50 \sin 110^\circ}{90} \\ \theta &= \sin^{-1}\left(\frac{50 \sin 110^\circ}{90}\right) = \boxed{31.5^\circ} \end{aligned}$$