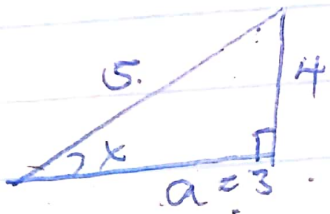


$$1 \quad \cot x = \frac{1}{\tan x}$$

$$\text{But } \tan x = \frac{\sin x}{\cos x} \Rightarrow \cot x = \frac{1}{\tan x} = \frac{\cos x}{\sin x}$$



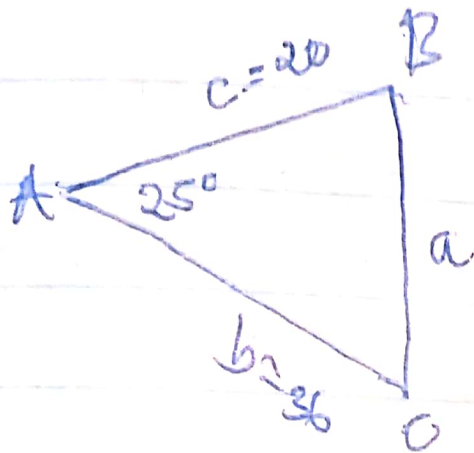
From Pythagorean theorem

$$5^2 = 4^2 + a^2 \quad a = \sqrt{5^2 - 4^2} = \sqrt{9} = 3.$$

$$= 3$$

$$\text{therefore } \cos x = \frac{3}{5}$$

$$\cot x = \frac{3}{5} \left(\frac{5}{4} \right) = \frac{3}{4}$$



✓ Here to find side a , we need to apply the law of cosines. Finding side a is through this formula & earlier since we have been given the two adjacent sides of Angle A.

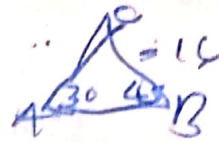
Therefore side a by cosine law would be given by

$$a^2 = b^2 + c^2 + 2bc \cos A$$

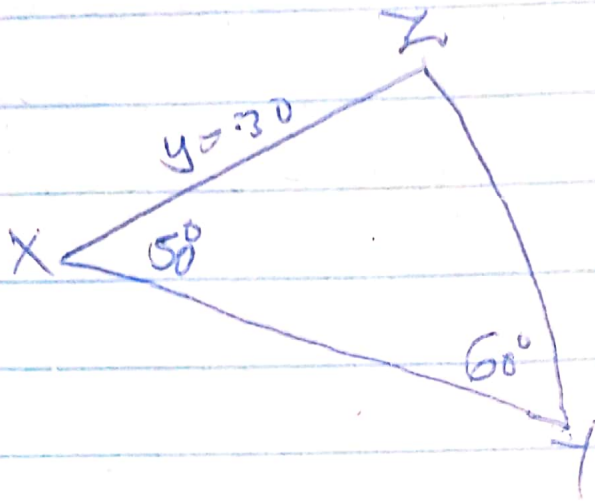
$$= 36^2 + 20^2 + 2(36)(20) \cos 25^\circ$$

$$=$$

sin



4



In finding side z in this triangle we apply the law of Sines which states that

$$\frac{\sin X}{x} = \frac{\sin Y}{y} = \frac{\sin Z}{z}$$

therefore our first step would be to find the size of Angle z . This is because to apply the law of sines we need to know atleast two angles in this case.

therefore finding z
the angles in a triangle adds up to 180°

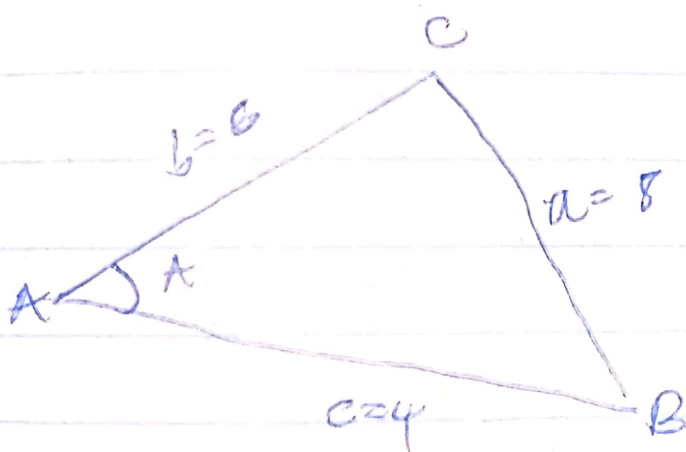
$$\therefore z = 180 - (50^\circ + 60^\circ) =$$

Applying the law of cosine

$$\frac{\sin Y}{\sin y} = \frac{\sin z}{z} \Rightarrow \frac{\sin 60}{30} = \frac{\sin 70}{z}$$

$$\Rightarrow z = \frac{30 \sin 70}{\sin 60}$$

3.



Here we apply the law of cosine ^{which} ~~states~~ ^{states} that:

$$a^2 = b^2 + c^2 + 2bc \cos A$$

The first step ⁱⁿ ~~is to~~ find $\angle A$ would be to check the two adjacent sides