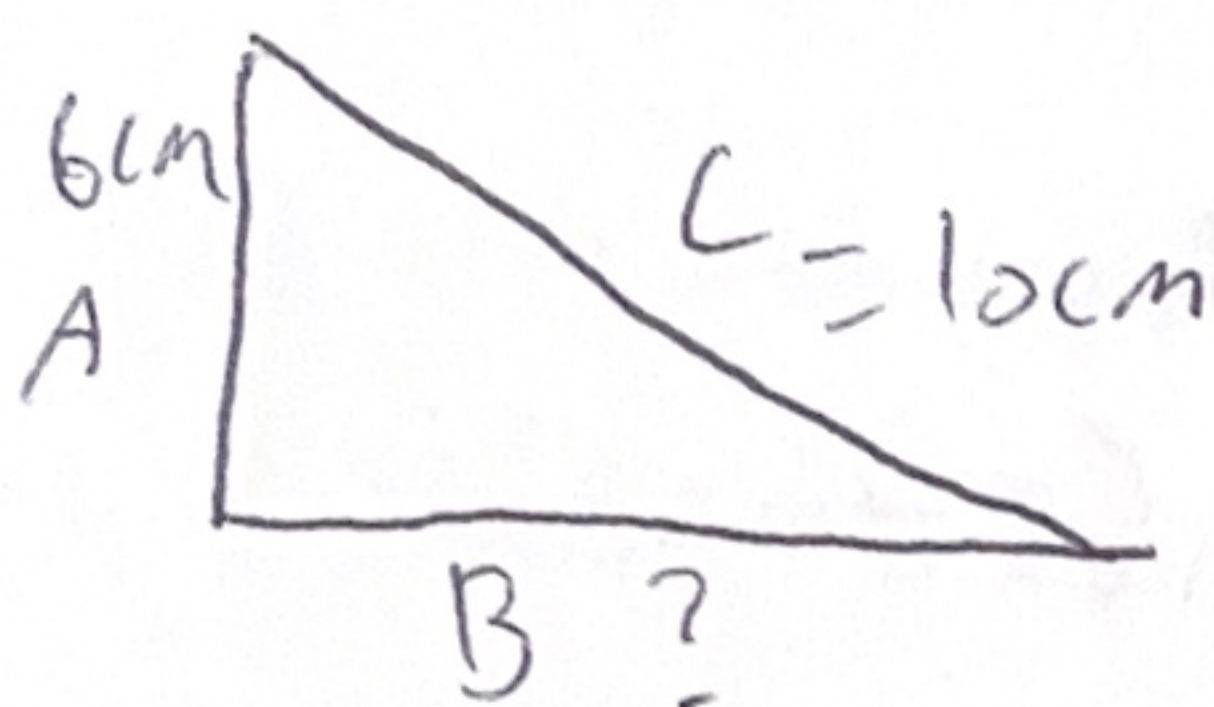


key

Trigonometry- Session 2 Worksheet

Pythagorean Theorem

1. There is a right Triangle with sides ABC. A = 6cm, and C = 10cm. Find side B using the formula $a^2 + b^2 = c^2$.



$$6^2 + b^2 = 10^2$$

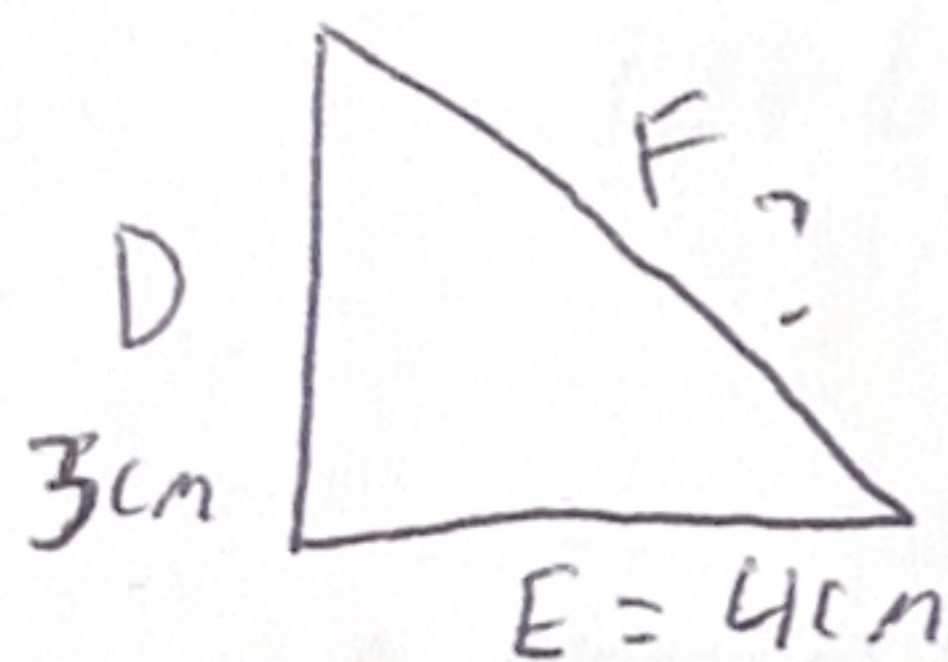
$$36 + b^2 = 100$$

$$\begin{array}{r} -36 \\ \hline b^2 = 64 \end{array}$$

$$b = \sqrt{64}$$

$$\boxed{b = 8}$$

2. There is a right Triangle with the sides DEF. E = 4cm and D = 3cm. Find Side F using the formula $r = \sqrt{x^2 + y^2}$



$$r = \sqrt{4^2 + 3^2}$$

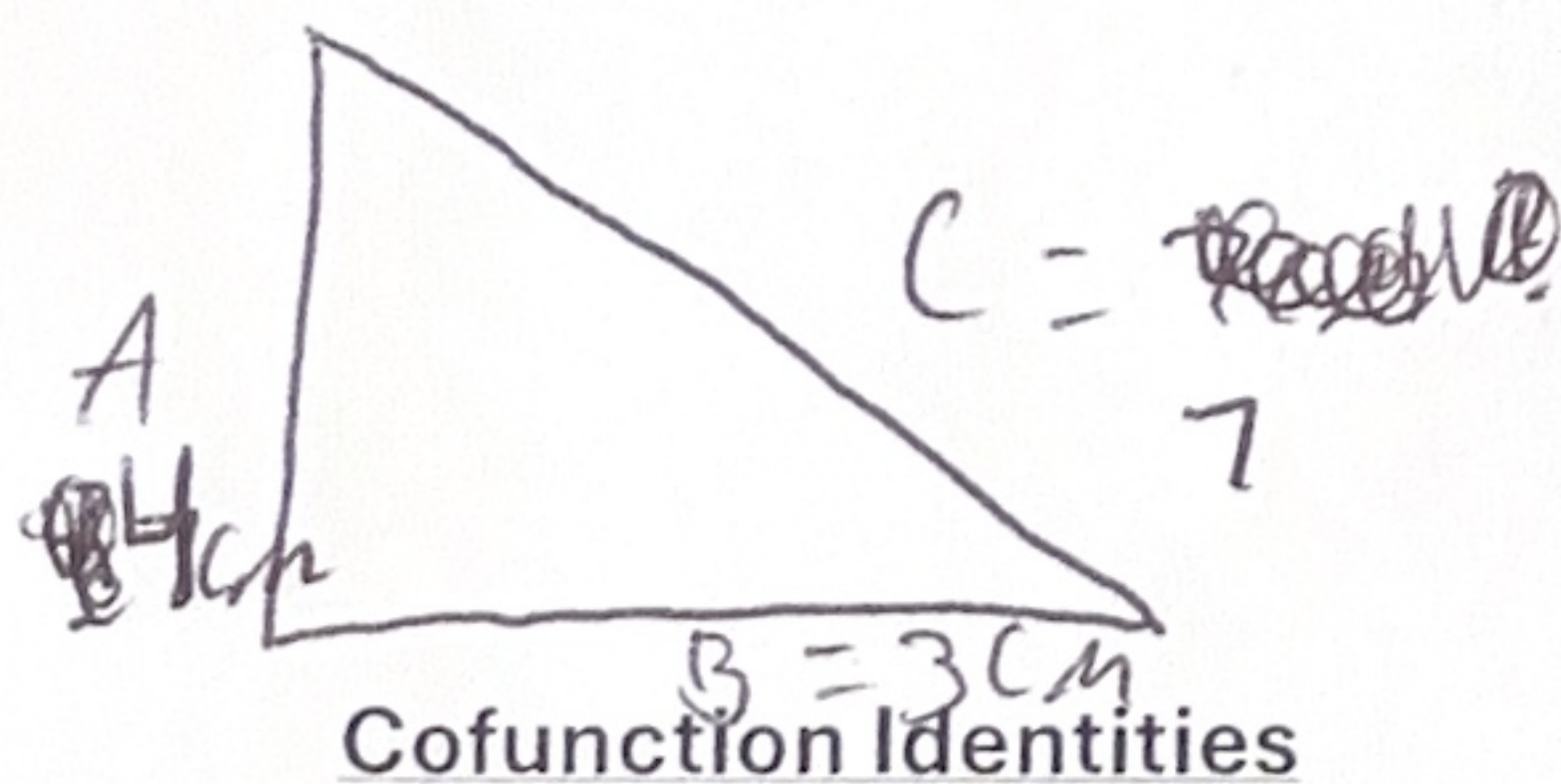
$$r = \sqrt{16 + 9}$$

$$r = \sqrt{25}$$

$$\boxed{r = 5}$$

$$\boxed{F = 5cm}$$

3. There is a right triangle with the sides ABC. B = 3cm, C = 7cm. Find A using the formula $\sin^2 2x + \cos^2 2x = 1$.



$$\sin^2\left(\frac{3}{7}\right) + \cos^2\left(\frac{3}{7}\right) = 1$$

make into decimal!

$$3/7 = (0.429)^2 = 0.187$$

$$1 - 0.187 = 0.813$$

$$1 - 0.429 = 0.571$$

$$\text{or } 4/7$$

Supplementary angles are any two angles that add up to 180°.

Complementary angles are any two angles that add up to 90°.

In this case, cofunctions are dealing with complementary angles.

Cofunction Identities

$$\sin \theta = \cos(90^\circ - \theta) \quad \cos \theta = \sin(90^\circ - \theta) \quad \tan \theta = \cot(90^\circ - \theta)$$

1. Write $\cos 36^\circ$ in terms of $\sin$

$$\sin(90 - 36) \rightarrow \boxed{\sin 54^\circ}$$

2. Write $\sin 47^\circ$ in terms of ~~sin~~ $\cos$

$$\cos(90 - 47) \rightarrow \boxed{\cos 43^\circ}$$

3. Write $\tan 56^\circ$ in terms of $\cot$

$$\cot(90 - 56) \rightarrow \boxed{\cot 34^\circ}$$

4. Write $\cot 25^\circ$ in terms of $\tan$

$$\tan(90 - 25) \rightarrow \boxed{\tan 65^\circ}$$