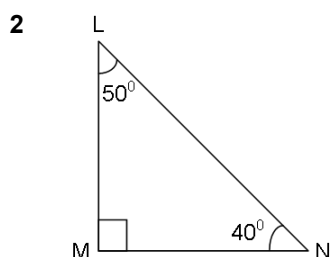
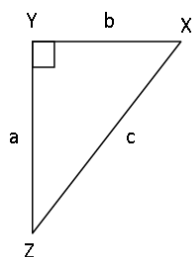


Chapter: 8

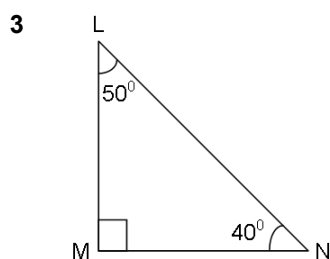
Q.1 Solve the following (Any Three)

3

- 1 In the right angled $\triangle XYZ$, $\angle XYZ = 90^\circ$ and a, b, c are the lengths of the sides as shown in the figure. Write the following ratio : $\sin X$.



In right angled $\triangle LMN$, $\angle LMN = 90^\circ$ $\angle L = 50^\circ$ and $\angle N = 40^\circ$, Write the following ratio.
 $\tan 40^\circ$



In right angled $\triangle LMN$, $\angle LMN = 90^\circ$ $\angle L = 50^\circ$ and $\angle N = 40^\circ$, Write the following ratio.
 $\cos 50^\circ$

- 4 Show that : $\sin 90^\circ = 2 \cos 45^\circ \sin 45^\circ$

- 5 $\tan 30^\circ \times \tan \dots\dots\dots^\circ = 1$

Q.2 Attempt the following (activity)

2

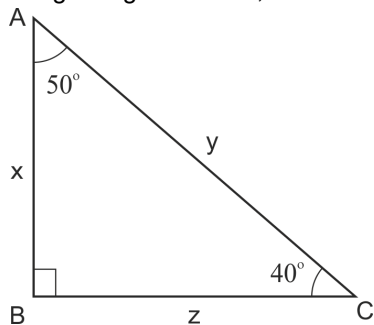
- 1 Find the values of -

$$\begin{aligned} & \frac{4}{5} \tan^2 60^\circ + 3 \sin^2 60^\circ \\ &= \frac{4}{5} \times \underline{\hspace{1cm}} + 3 \times \underline{\hspace{1cm}} \\ &= \frac{4}{5} \times 3 + 3 \times \frac{3}{4} \\ &= \frac{12}{5} + \frac{9}{4} \\ &= \underline{\hspace{1cm}} \\ &= \underline{\hspace{1cm}} \end{aligned}$$

Q.3 Answer the following (Any Three)

6

- 1 In right angled $\triangle ABC$, $\angle ABC = 90^\circ$, $\angle BAC = 50^\circ$, and $\angle ACB = 40^\circ$. Write the following ratio.

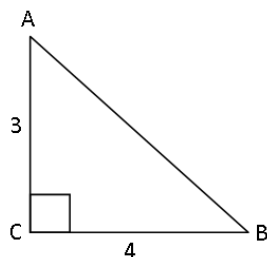


i) $\tan 50^\circ$ ii) $\sin 40^\circ$ iii) $\tan 40^\circ$ iv) $\cos 50^\circ$.

- 2 If $\sin \theta = 4/5$, $\tan \theta = \frac{4}{3}$, then find $\cos \theta$.

- 3 Find the value of : $\cos^2 45^\circ + \sin^2 60^\circ + \sin^2 30^\circ$.

- 4 In right angled $\triangle ACB$, If $\angle C = 90^\circ$, $AC = 3$, $BC = 4$. Find the ratios $\sin A$, $\sin B$, $\cos A$, $\tan B$



- 5 If A and B are acute angles and $\sin A = \cos B$, show that $A + B = 90^\circ$.

Q.4 Solve the following(Any Two)

- 1 In the following table, one of the trigonometric ratio is given. Using this find remaining trigonometric ratios.

$\sin \theta$	$\cos \theta$	$\tan \theta$
$\frac{3}{5}$		

- 2 In the following table, one of the trigonometric ratio is given. Using this find remaining trigonometric ratios.

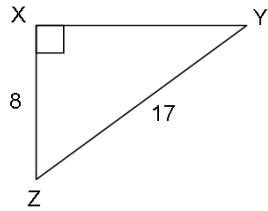
$\sin \theta$	$\cos \theta$	$\tan \theta$
$\frac{1}{2}$		

- 3 In the following table, one of the trigonometric ratio is given. Using this find remaining trigonometric ratios.

$\sin \theta$	$\cos \theta$	$\tan \theta$
		$\frac{1}{2\sqrt{2}}$

Q.5 Attempt the following. (activity)

- 1 In right angled $\triangle YXZ$, $\angle X = 90^\circ$, $XZ = 8$ cm, $YZ = 17$ cm, Find $\sin Y$, $\cos Y$, $\tan Y$, $\sin Z$, $\cos Z$, $\tan Z$.



In $\triangle YXZ$, $\angle X = 90^\circ$

\therefore _____ ... (Pythagoras theorem)

$$\therefore 17^2 = 8^2 + XY^2$$

$$\therefore 289 - 64 = XY^2$$

$$\therefore XY^2 = 225$$

$$\therefore XY = \underline{\hspace{2cm}}$$

$$\sin Z = \frac{XY}{YZ} = \frac{15}{17}$$

$$\cos Z = \underline{\hspace{2cm}}$$

$$\tan Z = \frac{XY}{XZ} = \frac{15}{8}$$

$$\sin Y = \underline{\hspace{2cm}}$$

$$\cos Y = \underline{\hspace{2cm}}$$

$$\tan Y = \underline{\hspace{2cm}}$$