REAL ACADEMY

Std.: 9 (English)	Mathematics Part - 2	Marks: 20
Date: 27-Dec-2022	Weekly test	Time: 1 HR
	Chapter: Chap -8	

Q.1 **Multiple Choice Questions** **3**

1 Which of the following statements is true ?

a. $\sin\theta = \cos(90 - \theta)$ b. $\cos\theta = \tan(90 - \theta)$

c. $\sin\theta = \tan(90 - \theta)$ d. $\tan\theta = \tan(90 - \theta)$

2 $\frac{\cos 28^0}{\sin 62^0}$ = ?

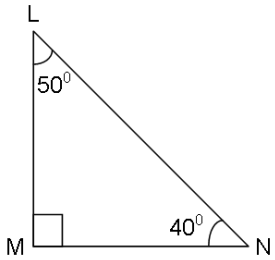
a. 2 b. -1 c. 0 d. 1

3 $2\tan 45° + \cos 45° - \sin 45°$ = ?

a. 0 b. 1 c. 2 d. 3

Q.2 **Solve the following(Any Three)** **3**

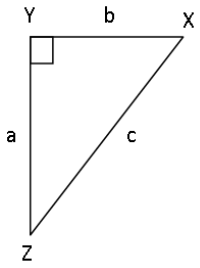
1



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

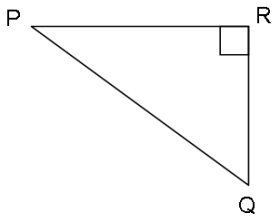
tan 40°

2 In the right angled ΔXYZ, $\angle$XYZ = 90^0 and a, b, c are the lengths of the sides as shown in the figure. Write the following ratio: tan Z.



3 Find the values of - $\cos^2 45° + \sin^2 30°$

4



In the figure $\angle$R is the right angle of ΔPQR. Write the following ratio : sin P.

Q.3 **Attempt the following (activity)(Any Two)** **4**

1 Find the values of -

$\frac{4}{5}\tan^2 60^0 + 3\sin^2 60^0$

$= \frac{4}{5} \times$ _____ $+ 3 \times$ _____

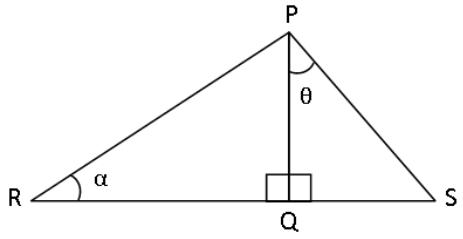
$= \frac{4}{5} \times 3 + 3 \times \frac{3}{4}$

$= \frac{12}{5} + \frac{9}{4}$

= _____

= _____

2 In the figure, $\angle PQR = 90^0$, $\angle PQS = 90^0$, $\angle PRQ = \alpha$ and $\angle QPS = \theta$ Write the following trigonometric ratios.
$\sin\theta$, $\cos\theta$, $\tan\theta$



$\sin\theta = \sin\angle QPS = \frac{\text{Opposite side of}\angle QPS}{\text{Hypotenuse}}$

$\therefore \sin\theta =$ _____ ;

$\cos\theta = \cos\angle QPS = \frac{\text{Adjacent side of}\angle QPS}{\text{Hypotenuse}}$

$\therefore \cos\theta =$ _____ ;

$\tan\theta = \tan\angle QPS =$ _____

$\therefore \tan\theta =$ _____

3 Find the value of -

$5\sin 30° + 3\tan 45°$

$= 5 \times$ _____ $+ 3 \times$ _____

$= \frac{5}{2} + 3$

= _____

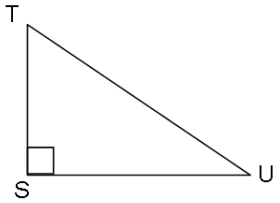
= _____

Q.4 **Solve the following(Any Two)** **6**

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

$\sin\theta$	$\cos\theta$	$\tan\theta$
		$\frac{8}{15}$

2 In right angled ΔTSU, TS = 5, $\angle S = 90°$, SU = 12 then find sin T, cos T, tan T. Similarly find sin U, cos U, tan U.



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

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

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

sin θ	cos θ	tan θ
$\frac{3}{5}$		

Q.5 **Answer the following.** **4**

1 In right angled ΔLMN, if ∠N = θ, ∠M = 90°, cos θ = $\frac{15}{17}$, find sin θ and tan θ.

Similarly, find $(\sin^2\theta) + (\cos^2\theta)$