INTRODUCTION TO TRIGONOMETRY

TRIGONOMETRIC RATIOS OF SOME SPECIFIC ANGLES

EXERCISE

Q.1 Find the value of θ in each of the following :

(i) $2 \sin 2\theta = \sqrt{3}$ (ii) $2 \cos 3\theta = 1$

Q.2 If θ is an acute angle and $\sin \theta = \cos \theta$, find the value of $2 \tan^2\theta + \sin^2\theta - 1$.

Q.3 An equilateral triangle is inscribed in a circle of radius 6 cm. Find its side.

Q.4 Using the formula,

$\sin(A - B) = \sin A \cos B - \cos A \sin B$, find the value of $\sin 15^\circ$.

Q.5 If $\tan (A + B) = \sqrt{3}$ and $\tan (A - B) = \frac{1}{\sqrt{3}}$; $0° < A + B \leq 90°$; $A > B$, find A and B.

ANSWER KEY

1 (i) $\theta = 30°$ (ii) $\theta = 20°$.

2 $\frac{3}{2}$

3 $6\sqrt{3}$ cm.

4 $\frac{\sqrt{3}-1}{2\sqrt{2}}$

5 $A = 45°$ $B = 15°$