# Class 10 Mathematics · Chapter 8: Introduction to Trigonometry

**Worksheet** · 20 marks · about 40 minutes · based on NCERT

Name _____ Class and section _____ Date _____

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**1.** In ΔPQR, right-angled at Q, PQ = 8 cm, QR = 15 cm and PR = 17 cm. The value of cos R is [1]

(a) $\frac{8}{17}$ (b) $\frac{15}{17}$

(c) $\frac{8}{15}$ (d) $\frac{17}{15}$

**2.** If $\sin A = \frac{2}{3}$, then cosec A is [1]

(a) $\frac{2}{3}$ (b) $\frac{\sqrt{5}}{3}$

(c) $\frac{3}{\sqrt{5}}$ (d) $\frac{3}{2}$

**3.** In ΔABC, right-angled at B, AB = 5 cm, BC = 12 cm and AC = 13 cm. The value of sin A is [1]

(a) $\frac{12}{13}$ (b) $\frac{5}{13}$

(c) $\frac{12}{5}$ (d) $\frac{5}{12}$

**4.** The value of cos 0° + sin 90° + sin 0° is [1]

(a) 0 (b) 1

(c) 2 (d) 3

**5.** The value of tan 45° + sin 45° cos 45° is [1]

(a) $\frac{3}{2}$ (b) 1

(c) 2 (d) $\frac{1}{2}$

**6.** Evaluate: (tan 45° + sin 60°)(tan 45° − sin 60°). [2]

**7.** If A is an acute angle and 3 sin A = 1, find cos A and cot A. [2]

**8.** Write the values of sin 0° and cos 90°. Which one of tan 0° and tan 90° is not defined? Give a reason. [2]

**9.** In ΔPQR, right-angled at Q, PQ : QR = 20 : 21 and PR = 58 cm. Find PQ and QR, and hence sin P, cos P and tan P. [3]



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**10.** Prove that $\sec^4 A - \sec^2 A = \tan^4 A + \tan^2 A$. [3]

**11.** Evaluate: $\frac{2\tan^2 60° + 6\cos^2 45° - 3\sec^2 30°}{\sin^2 60° + \cos^2 60° + \cot^2 30°}$. [3]