

**EduSahara™ Learning Center Assignment****Grade : Class X, CBSE****Chapter : Introduction to Trigonometry****Name : Trigonometry Word Problems**

1. In  $\triangle BCD$ , right angled at  $C$ , if  $\tan B = \frac{2}{9}$ , find  $\sin B \cos D + \cos B \sin D$

- (i) 1 (ii)  $\frac{9}{85} \sqrt{85}$  (iii)  $\frac{1}{9} \sqrt{85}$  (iv)  $\frac{2}{85} \sqrt{85}$  (v)  $\frac{1}{2} \sqrt{85}$

2. In  $\triangle DEF$ , right angled at  $E$ , if  $\tan D = \frac{2}{5}$ , find  $\cos D \cos F - \sin D \sin F$

- (i) 0 (ii)  $\frac{5}{29} \sqrt{29}$  (iii)  $\frac{2}{29} \sqrt{29}$  (iv)  $\frac{1}{2} \sqrt{29}$  (v)  $\frac{1}{5} \sqrt{29}$

3. Find the length of the side of a 10-sided regular polygon inscribed in a circle of radius 1 mt

- (i) 0.7180 mt (ii) 0.5180 mt (iii) 0.6680 mt (iv) 0.6180 mt

4. Find the length of the chord of the unit circle subtending an angle of  $152^\circ$  at the centre

- (i) 1.9406 (ii) 2.0406 (iii) 1.8406 (iv) 1.9906

5. Find the area of the right angled triangle with hypotenuse 4 cm and one of the acute angle being  $34^\circ$

- (i) 2.7086 cm (ii) 5.7086 cm (iii) 4.7086 cm (iv) 3.7086 cm

6. Find the area of an isosceles triangle with base 6 cm and vertical angle  $40^\circ$

- (i) 23.7253 cm (ii) 24.7253 cm (iii) 25.7253 cm (iv) 26.7253 cm

7. If  $P$ ,  $Q$  and  $R$  are the interior angles of a triangle, then  $\sin\left(\frac{P+Q}{2}\right) =$

- (i)  $\cos\left(\frac{P}{2}\right)$  (ii)  $\cos\left(\frac{R}{2}\right)$  (iii)  $\sin\left(\frac{R}{2}\right)$  (iv)  $\sin R$  (v)  $\sin\left(\frac{P}{2}\right)$

8. Find the length of the side of a 11-sided regular polygon inscribed in a circle of radius 1 mt

- (i) 0.6512 mt (ii) 0.6012 mt (iii) 0.5512 mt (iv) 0.4512 mt

9. Find the length of the chord of the unit circle subtending an angle of  $137^\circ$  at the centre

- (i) 1.8608 (ii) 1.9608 (iii) 1.9108 (iv) 1.7608

10. Find the area of the right angled triangle with hypotenuse 3 cm and one of the acute angle being  $64^\circ$

- (i) 3.7732 cm (ii) 0.7732 cm (iii) 1.7732 cm (iv) 2.7732 cm

11. Find the area of an isosceles triangle with base 4 cm and vertical angle  $41^\circ$

(i) 11.6980 cm (ii) 12.6980 cm (iii) 10.6980 cm (iv) 9.6980 cm

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## Assignment Key

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- 1) (i)
- 2) (i)
- 3) (iv)
- 4) (i)
- 5) (iv)
- 6) (ii)
- 7) (ii)
- 8) (iii)
- 9) (i)
- 10) (iii)
- 11) (iii)