EduSahara™ Assignment

Name : Trigonometric Ratio Equivalents

Chapter : Trigonometry

Grade : SSC Grade X

1. $\sin G =$

(i) $\frac{1}{\cot G}$ (ii) $\frac{1}{\cos G}$ (iii) $\frac{1}{\operatorname{cosec} G}$ (iv) $\frac{1}{\sec G}$ (v) $\frac{1}{\tan G}$

2. $\cos J =$

(i) $\frac{1}{\sin J}$ (ii) $\frac{1}{\sec J}$ (iii) $\frac{1}{\tan J}$ (iv) $\frac{1}{\operatorname{cosec} J}$ (v) $\frac{1}{\cot J}$

3. $\tan G =$

(i) $\frac{1}{\cos G}$ (ii) $\frac{1}{\operatorname{cosec} G}$ (iii) $\frac{1}{\sec G}$ (iv) $\frac{1}{\cot G}$ (v) $\frac{1}{\sin G}$

4. $\cot M =$

(i) $\frac{1}{\sin M}$ (ii) $\frac{1}{\operatorname{cosec} M}$ (iii) $\frac{1}{\sec M}$ (iv) $\frac{1}{\cos M}$ (v) $\frac{1}{\tan M}$

5. $\sec J =$

(i) $\frac{1}{\tan J}$ (ii) $\frac{1}{\operatorname{cosec} J}$ (iii) $\frac{1}{\cos J}$ (iv) $\frac{1}{\sin J}$ (v) $\frac{1}{\cot J}$

6. $\operatorname{cosec} M =$

(i) $\frac{1}{\cot M}$ (ii) $\frac{1}{\sec M}$ (iii) $\frac{1}{\cos M}$ (iv) $\frac{1}{\tan M}$ (v) $\frac{1}{\sin M}$

7. If $\sin 5x = \cos((x+30))$, then $x =$

(i) 11 (ii) 8 (iii) 10 (iv) 9 (v) 13

8. If $\cos 5x = \sin((x+48))$, then $x =$

(i) 8 (ii) 7 (iii) 5 (iv) 6 (v) 10

9. If $\tan 8x = \cot((x-36))$, then $x =$

(i) 16 (ii) 14 (iii) 13 (iv) 15 (v) 12

10. If $\cot 7x = \tan((x+26))$, then $x =$

(i) 7 (ii) 10 (iii) 5 (iv) 8 (v) 9

11. If $\sec 6x = \operatorname{cosec}((x+27))$, then $x =$

(i) 8 (ii) 11 (iii) 9 (iv) 6 (v) 10

12. If $\operatorname{cosec} 6x = \sec((x+55))$, then $x =$

(i) 8 (ii) 4 (iii) 3 (iv) 5 (v) 6

13. Which of the following are true?

a) $\sin 59° = \cos 31°$
b) $\sin 49° = \cos 49°$
c) $\tan 50° = \cot 40°$
d) $\sin 28° = \cos 62°$
e) $\cos 39° = \sin 39°$
f) $\sin 58° = \cos 32°$
g) $\sec 47° = \operatorname{cosec} 43°$

(i) {b,f,g} (ii) {a,c,d,f,g} (iii) {b,a} (iv) {b,e,d} (v) {e,c}

14. Which of the following are true?

a) $\tan(90 - \theta) = -\tan\theta$
b) $\operatorname{cosec}(90 - \theta) = \sec\theta$
c) $\sec(90 - \theta) = \operatorname{cosec}\theta$
d) $\cos(90 - \theta) = \cot\theta$
e) $\cos(90 - \theta) = \cos\theta$
f) $\cot(90 - \theta) = \tan\theta$

(i) {b,c,f} (ii) {e,a,f} (iii) {a,b} (iv) {d,c} (v) {d,b,c}

15. Which of the following are true?

a) $\cot(90 - \theta) = \tan\theta$
b) $\cos(90 - \theta) = \sin\theta$
c) $\sin(90 - \theta) = \cos\theta$
d) $\cos(90 - \theta) = -\cos\theta$
e) $\tan(90 - \theta) = \cot\theta$
f) $\sin(90 - \theta) = -\sin\theta$

(i) {a,b,c,e} (ii) {f,b} (iii) {d,a} (iv) {d,e,a} (v) {d,f,c}

Assignment Key

1) (iii)	2) (ii)	3) (iv)	4) (v)	5) (iii)	6) (v)
7) (iii)	8) (ii)	9) (ii)	10) (iv)	11) (iii)	12) (iv)
13) (ii)	14) (i)	15) (i)			