EduSahara™ Assignment

Name : Trigonometric Ratio Equivalents

Chapter : Trigonometry

Grade : SSC Grade X

1. $\sin F =$

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

2. $\cos C =$

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

3. $\tan C =$

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

4. $\cot M =$

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

5. $\sec I =$

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

6. $\operatorname{cosec} M =$

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

7. If $\sin 5x = \cos((x+12))$, then $x =$

(i) 14 (ii) 15 (iii) 10 (iv) 13 (v) 12

8. If $\cos 5x = \sin((x+18))$, then $x =$

(i) 9 (ii) 12 (iii) 11 (iv) 13 (v) 14

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

(i) 7 (ii) 8 (iii) 9 (iv) 12 (v) 10

10. If $\cot 8x = \tan((x+9))$, then $x =$

(i) 9 (ii) 8 (iii) 10 (iv) 11 (v) 7

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

(i) 15 (ii) 11 (iii) 12 (iv) 9 (v) 13

12. If $\operatorname{cosec} 4x = \sec((x+25))$, then $x =$

(i) 12 (ii) 13 (iii) 15 (iv) 11 (v) 14

13. Which of the following are true?

a) $\tan 26° = \cot 64°$
b) $\sec 42° = \operatorname{cosec} 48°$
c) $\sin 35° = \cos 55°$
d) $\cos 36° = \sin 36°$
e) $\sin 39° = \cos 51°$
f) $\sin 25° = \cos 65°$
g) $\sin 58° = \cos 58°$

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

14. Which of the following are true?

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

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

15. Which of the following are true?

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

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

Assignment Key

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