EduSahara™ Assignment

Name : Trigonometric Ratio Equivalents

Chapter : Introduction to Trigonometry

Grade : CBSE Grade X

1. Which of the following are true?

a) $\sin 38° = \cos 52°$
b) $\sin 39° = \cos 51°$
c) $\tan 42° = \cot 48°$
d) $\sec 37° = \operatorname{cosec} 53°$
e) $\cos 31° = \sin 31°$
f) $\sin 46° = \cos 44°$
g) $\sin 41° = \cos 41°$

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

2. Which of the following are true?

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

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

3. Which of the following are true?

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

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

4. Which of the following are true?

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

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

5. Which of the following are true?

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

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

6. Which of the following are true?

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

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

7. Which of the following are true?

a) $\text{cosec}(-\theta) = -\text{cosec}\,\theta$
b) $\text{cosec}(-\theta) = \text{cosec}\,\theta$
c) $\sec(-\theta) = -\sec\theta$
d) $\cot(-\theta) = -\cot\theta$
e) $\sec(-\theta) = \sec\theta$
f) $\cot(-\theta) = \cot\theta$

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

8. Which of the following are true?

a) $\sin(180+\theta) = -\sin\theta$
b) $\cos(180+\theta) = -\cos\theta$
c) $\tan(180+\theta) = \cot\theta$
d) $\cos(180+\theta) = \sin\theta$
e) $\tan(180+\theta) = \tan\theta$
f) $\sin(180+\theta) = \cos\theta$

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

9. Which of the following are true?

a) $\tan(180-\theta) = -\tan\theta$
b) $\sin(180-\theta) = \cos\theta$
c) $\cos(180-\theta) = -\cos\theta$
d) $\tan(180-\theta) = -\cot\theta$
e) $\sin(180-\theta) = \sin\theta$
f) $\cos(180-\theta) = -\sin\theta$

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

10. Which of the following are true?

a) $\sec(180+\theta) = -\sec\theta$
b) $\cot(180+\theta) = \cot\theta$
c) $\sec(180+\theta) = \operatorname{cosec}\theta$
d) $\cot(180+\theta) = \tan\theta$
e) $\operatorname{cosec}(180+\theta) = \sec\theta$
f) $\operatorname{cosec}(180+\theta) = -\operatorname{cosec}\theta$

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

11. Which of the following are true?

a) $\sec(180-\theta) = -\sec\theta$
b) $\cot(180-\theta) = -\cot\theta$
c) $\sec(180-\theta) = -\operatorname{cosec}\theta$
d) $\cot(180-\theta) = -\tan\theta$
e) $\operatorname{cosec}(180-\theta) = \sec\theta$
f) $\operatorname{cosec}(180-\theta) = \operatorname{cosec}\theta$

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

12. Which of the following are true?

a) $\cos(270+\theta) = \cos\theta$
b) $\sin(270+\theta) = -\cos\theta$
c) $\tan(270+\theta) = -\tan\theta$
d) $\sin(270+\theta) = -\sin\theta$
e) $\cos(270+\theta) = \sin\theta$
f) $\tan(270+\theta) = -\cot\theta$

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

13. Which of the following are true?

a) $\tan(270-\theta) = \tan\theta$
b) $\sin(270-\theta) = -\sin\theta$
c) $\cos(270-\theta) = -\cos\theta$
d) $\sin(270-\theta) = -\cos\theta$
e) $\cos(270-\theta) = -\sin\theta$
f) $\tan(270-\theta) = \cot\theta$

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

14. Which of the following are true?

a) $\sec(270+\theta) = \sec\theta$
b) $\sec(270+\theta) = \operatorname{cosec}\theta$
c) $\operatorname{cosec}(270+\theta) = -\operatorname{cosec}\theta$
d) $\operatorname{cosec}(270+\theta) = -\sec\theta$
e) $\cot(270+\theta) = -\cot\theta$
f) $\cot(270+\theta) = -\tan\theta$

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

15. Which of the following are true?

a) $\sec(270-\theta) = -\sec\theta$
b) $\operatorname{cosec}(270-\theta) = -\sec\theta$
c) $\sec(270-\theta) = -\operatorname{cosec}\theta$
d) $\cot(270-\theta) = \tan\theta$
e) $\cot(270-\theta) = \cot\theta$
f) $\operatorname{cosec}(270-\theta) = -\operatorname{cosec}\theta$

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

16. Which of the following are true?

a) $\tan(360+\theta) = \tan\theta$
b) $\tan(360+\theta) = \cot\theta$
c) $\cos(360+\theta) = \sin\theta$
d) $\sin(360+\theta) = \sin\theta$
e) $\sin(360+\theta) = \cos\theta$
f) $\cos(360+\theta) = \cos\theta$

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

17. Which of the following are true?

a) $\tan(360-\theta) = -\cot\theta$
b) $\sin(360-\theta) = -\cos\theta$
c) $\tan(360-\theta) = -\tan\theta$
d) $\cos(360-\theta) = \cos\theta$
e) $\cos(360-\theta) = \sin\theta$
f) $\sin(360-\theta) = -\sin\theta$

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

Assignment Key

1) (v)	2) (iv)	3) (ii)	4) (iii)	5) (ii)	6) (v)
7) (v)	8) (ii)	9) (i)	10) (i)	11) (v)	12) (iv)
13) (ii)	14) (i)	15) (i)	16) (v)	17) (ii)	