EduSahara™ Assignment

Name : Trigonometric Ratio Equivalents

Chapter : Introduction to Trigonometry

Grade : CBSE Grade X

1. Which of the following are true?

a) $\cos 40° = \sin 40°$
b) $\sin 27° = \cos 63°$
c) $\sin 55° = \cos 35°$
d) $\sin 23° = \cos 23°$
e) $\sin 33° = \cos 57°$
f) $\tan 46° = \cot 44°$
g) $\sec 24° = \operatorname{cosec} 66°$

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

2. Which of the following are true?

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

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

3. Which of the following are true?

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

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

4. Which of the following are true?

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

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

5. Which of the following are true?

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

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

6. Which of the following are true?

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

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

7. Which of the following are true?

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

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

8. Which of the following are true?

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

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

9. Which of the following are true?

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

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

10. Which of the following are true?

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

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

11. Which of the following are true?

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

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

12. Which of the following are true?

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

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

13. Which of the following are true?

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

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

14. Which of the following are true?

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

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

15. Which of the following are true?

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

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

16. Which of the following are true?

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

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

17. Which of the following are true?

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

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

Assignment Key

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