

EduSahara™ Learning Center Assignment**Grade : Class X, ICSE****Chapter : Trigonometrical Identities****Name : Trigonometric Ratios of Complementary Angles**

1. Which of the following are true?

a) $\sin 56^\circ = \cos 56^\circ$

b) $\sec 37^\circ = \operatorname{cosec} 53^\circ$

c) $\sin 48^\circ = \cos 42^\circ$

d) $\tan 30^\circ = \cot 60^\circ$

e) $\sin 47^\circ = \cos 43^\circ$

f) $\sin 34^\circ = \cos 56^\circ$

g) $\cos 49^\circ = \sin 49^\circ$

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

2. Which of the following are true?

a) $\operatorname{cosec} (90 - \theta) = \sec \theta$

b) $\sec (90 - \theta) = \operatorname{cosec} \theta$

c) $\tan (90 - \theta) = -\tan \theta$

d) $\cos (90 - \theta) = \cos \theta$

e) $\cot (90 - \theta) = \tan \theta$

f) $\cos (90 - \theta) = \cot \theta$

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

3. Which of the following are true?

a) $\cos (90 - \theta) = -\cos \theta$

b) $\sin (90 - \theta) = \cos \theta$

c) $\cot (90 - \theta) = \tan \theta$

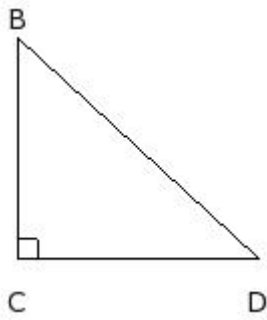
d) $\cos (90 - \theta) = \sin \theta$

e) $\tan (90 - \theta) = \cot \theta$

f) $\sin (90 - \theta) = -\sin \theta$

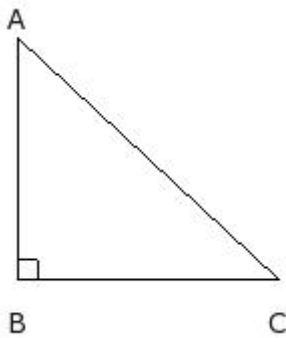
(i) {a,b} (ii) {a,e,b} (iii) {a,f,d} (iv) {f,c} (v) {b,c,d,e}

4. From the given figure, find $\sin (90 - B)$



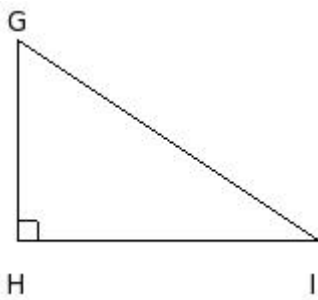
- (i) $\frac{BC}{BD}$ (ii) $\frac{CD}{BD}$ (iii) $\frac{CD}{BC}$ (iv) $\frac{BD}{CD}$ (v) $\frac{BC}{CD}$

5. From the given figure, find $\cos(90^\circ - A)$



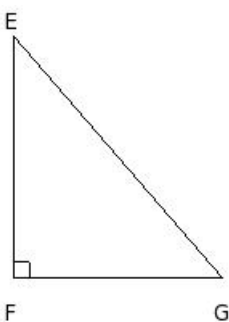
- (i) $\frac{AC}{AB}$ (ii) $\frac{AB}{BC}$ (iii) $\frac{AB}{AC}$ (iv) $\frac{BC}{AB}$ (v) $\frac{BC}{AC}$

6. From the given figure, find $\tan(90^\circ - G)$



- (i) $\frac{GH}{GI}$ (ii) $\frac{HI}{GI}$ (iii) $\frac{GH}{HI}$ (iv) $\frac{GI}{GH}$ (v) $\frac{GI}{HI}$

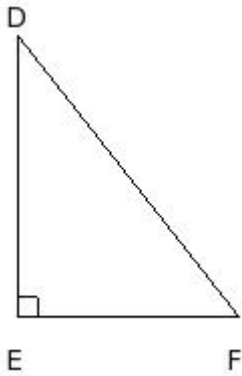
7. From the given figure, find $\operatorname{cosec}(90^\circ - E)$



- (i) $\frac{EG}{EF}$ (ii) $\frac{EG}{FG}$ (iii) $\frac{EF}{EG}$ (iv) $\frac{FG}{EG}$ (v) $\frac{FG}{EF}$

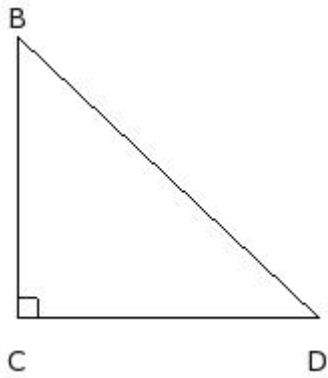
FG EF FG EG EF

8. From the given figure, find $\sec(90^\circ - D)$



- (i) $\frac{EF}{DE}$ (ii) $\frac{DE}{EF}$ (iii) $\frac{DE}{DF}$ (iv) $\frac{DF}{EF}$ (v) $\frac{DF}{DE}$

9. From the given figure, find $\cot(90^\circ - D)$



- (i) $\frac{CD}{BD}$ (ii) $\frac{BD}{BC}$ (iii) $\frac{BD}{CD}$ (iv) $\frac{BC}{CD}$ (v) $\frac{BC}{BD}$

Assignment Key

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