EduSahara™ Assignment

Name : Trigonometric Ratios of Complementary Angles

Chapter : Trigonometrical Identities

Grade : ICSE Grade X

1. Which of the following are true?

a) $\sin 55° = \cos 35°$
b) $\sin 42° = \cos 42°$
c) $\sin 56° = \cos 34°$
d) $\tan 57° = \cot 33°$
e) $\sin 24° = \cos 66°$
f) $\sec 51° = \operatorname{cosec} 39°$
g) $\cos 49° = \sin 49°$

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

2. Which of the following are true?

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

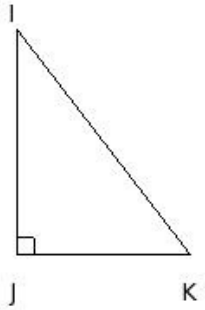
(i) {a,d,e} (ii) {c,a,d} (iii) {b,a} (iv) {f,b,e} (v) {c,d}

3. Which of the following are true?

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

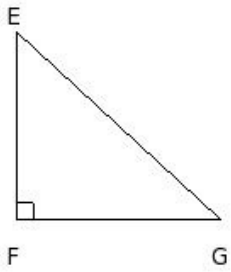
(i) {b,d} (ii) {a,c} (iii) {c,d,e,f} (iv) {a,b,e} (v) {a,f,c}

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



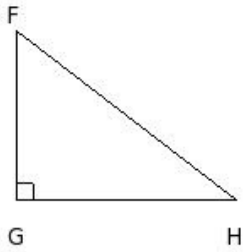
(i) $\frac{IK}{JK}$ (ii) $\frac{IJ}{JK}$ (iii) $\frac{JK}{IK}$ (iv) $\frac{IJ}{IK}$ (v) $\frac{JK}{IJ}$

5. From the given figure, find $\cos(90 - G)$



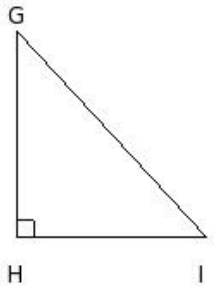
(i) $\frac{EF}{FG}$ (ii) $\frac{EF}{EG}$ (iii) $\frac{EG}{FG}$ (iv) $\frac{FG}{EG}$ (v) $\frac{FG}{EF}$

6. From the given figure, find $\tan(90 - F)$



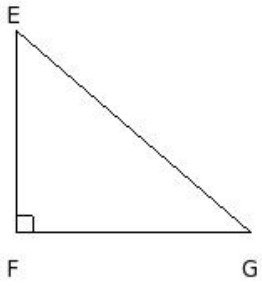
(i) $\frac{FG}{FH}$ (ii) $\frac{FH}{FG}$ (iii) $\frac{GH}{FH}$ (iv) $\frac{FG}{GH}$ (v) $\frac{FH}{GH}$

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



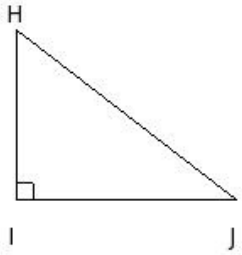
(i) $\frac{GH}{HI}$ (ii) $\frac{HI}{GH}$ (iii) $\frac{GH}{GI}$ (iv) $\frac{GI}{HI}$ (v) $\frac{GI}{GH}$

8. From the given figure, find $\sec(90 - E)$



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

9. From the given figure, find $\cot(90 - H)$



(i) $\frac{HJ}{HI}$ (ii) $\frac{HJ}{IJ}$ (iii) $\frac{IJ}{HI}$ (iv) $\frac{HI}{HJ}$ (v) $\frac{IJ}{HJ}$

Assignment Key

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