EduSahara™ Assignment

Name : Trigonometric Ratios of Complementary Angles

Chapter : Trigonometrical Identities

Grade : ICSE Grade X

1. Which of the following are true?

a) $\sin 52° = \cos 52°$
b) $\sin 29° = \cos 61°$
c) $\tan 41° = \cot 49°$
d) $\sin 33° = \cos 57°$
e) $\cos 44° = \sin 44°$
f) $\sec 36° = \operatorname{cosec} 54°$
g) $\sin 20° = \cos 70°$

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

2. Which of the following are true?

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

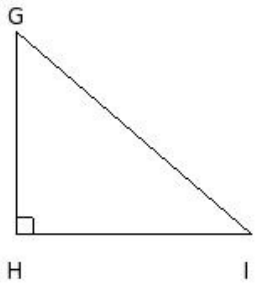
(i) {f,a,e} (ii) {d,b,c} (iii) {b,c,e} (iv) {d,c} (v) {a,b}

3. Which of the following are true?

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

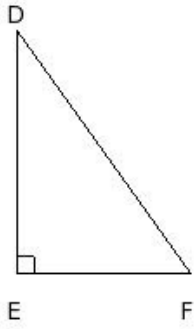
(i) {d,f,a} (ii) {d,e,c} (iii) {d,a} (iv) {e,b} (v) {a,b,c,f}

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



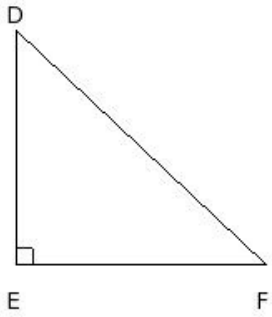
(i) $\frac{GH}{HI}$ (ii) $\frac{HI}{GI}$ (iii) $\frac{GI}{GH}$ (iv) $\frac{GH}{GI}$ (v) $\frac{HI}{GH}$

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



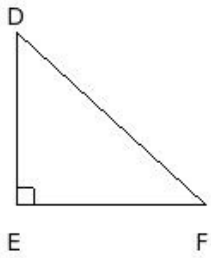
(i) $\frac{EF}{DF}$ (ii) $\frac{DE}{EF}$ (iii) $\frac{DF}{DE}$ (iv) $\frac{DE}{DF}$ (v) $\frac{EF}{DE}$

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



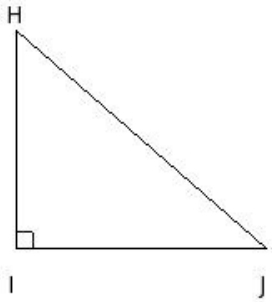
(i) $\frac{DF}{EF}$ (ii) $\frac{DF}{DE}$ (iii) $\frac{EF}{DE}$ (iv) $\frac{EF}{DF}$ (v) $\frac{DE}{DF}$

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



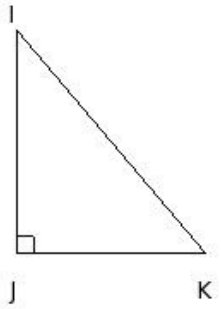
(i) $\frac{EF}{DE}$ (ii) $\frac{DE}{DF}$ (iii) $\frac{DF}{DE}$ (iv) $\frac{DE}{EF}$ (v) $\frac{DF}{EF}$

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



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

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



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

Assignment Key

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