EduSahara™ Assignment

Name : Basics of Trigonometric Ratios

Chapter : Introduction to Trigonometry

Grade : CBSE Grade X

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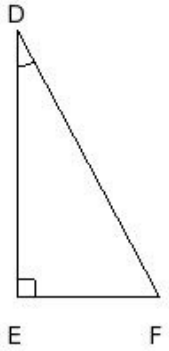
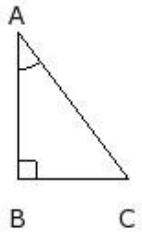
1. In the given figure, $\sin D =$



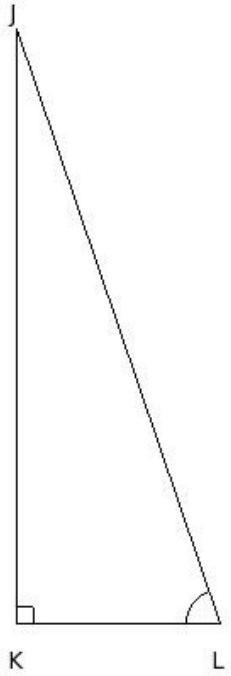

(i) $\frac{GF}{GE}$ (ii) $\frac{EF}{ED}$ (iii) $\frac{FE}{DE}$ (iv) $\frac{DE}{FE}$ (v) $\frac{EF}{DF}$

2. In the given figure, $\cos A =$



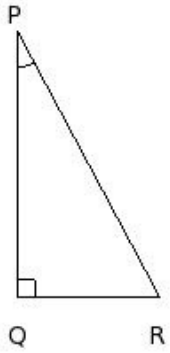

(i) $\frac{CA}{BA}$ (ii) $\frac{AB}{AC}$ (iii) $\frac{AC}{AB}$ (iv) $\frac{CB}{DB}$ (v) $\frac{CA}{CB}$

3. In the given figure, $\tan L =$



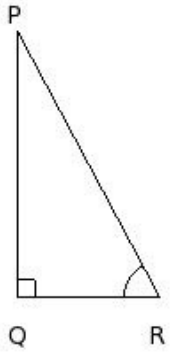

(i) $\frac{LK}{JL}$ (ii) $\frac{LK}{ML}$ (iii) $\frac{JK}{LJ}$ (iv) $\frac{LJ}{KL}$ (v) $\frac{JK}{KL}$

4. In the given figure, $\cot P =$



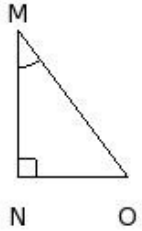

(i) $\frac{PQ}{QR}$ (ii) $\frac{RP}{QR}$ (iii) $\frac{RP}{PQ}$ (iv) $\frac{RQ}{SR}$ (v) $\frac{PR}{RQ}$

5. In the given figure, $\sec R =$



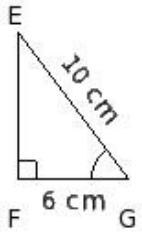

(i) $\frac{QP}{QR}$ (ii) $\frac{PQ}{PR}$ (iii) $\frac{RQ}{RP}$ (iv) $\frac{PR}{QR}$ (v) $\frac{SQ}{SR}$

6. In the given figure, $\operatorname{cosec} M =$



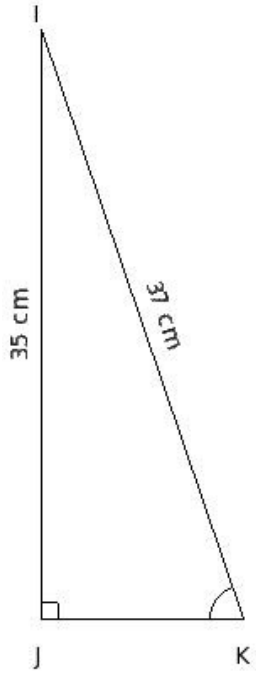

(i) $\frac{NM}{NO}$ (ii) $\frac{MO}{NO}$ (iii) $\frac{MN}{ON}$ (iv) $\frac{PN}{PO}$ (v) $\frac{ON}{MN}$

7. In the given figure, $\sin G =$



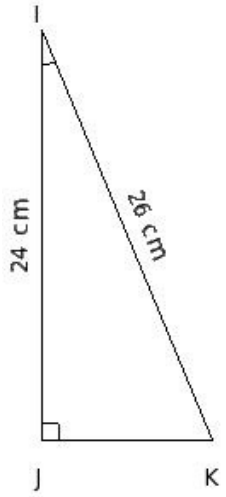

(i) $\frac{2}{5}$ (ii) $\frac{4}{7}$ (iii) $\frac{6}{5}$ (iv) $\frac{4}{5}$ (v) $\frac{4}{3}$

8. In the given figure, $\cos K =$



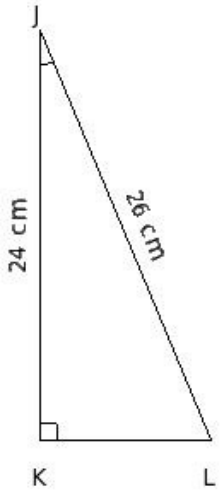

(i) $\frac{12}{35}$ (ii) $\frac{12}{37}$ (iii) $\frac{10}{37}$ (iv) $\frac{4}{13}$ (v) $\frac{14}{37}$

9. In the given figure, $\tan I =$



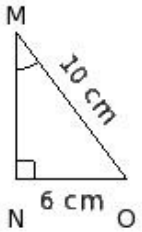

(i) $\frac{7}{12}$ (ii) $\frac{1}{2}$ (iii) $\frac{5}{12}$ (iv) $\frac{5}{14}$ (v) $\frac{1}{4}$

10. In the given figure, $\cot J =$



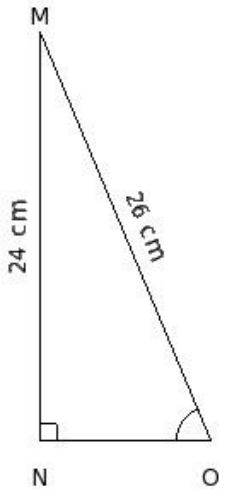

(i) 2 (ii) $\frac{12}{5}$ (iii) $\frac{14}{5}$ (iv) $\frac{12}{7}$ (v) 4

11. In the given figure, $\sec M =$




(i) $\frac{5}{6}$ (ii) $\frac{3}{4}$ (iii) $\frac{5}{4}$ (iv) $\frac{7}{4}$ (v) $\frac{5}{2}$

12. In the given figure, $\operatorname{cosec} O =$




(i) $\frac{13}{12}$ (ii) $\frac{13}{10}$ (iii) $\frac{11}{12}$ (iv) $\frac{5}{4}$ (v) $\frac{13}{14}$

13. $\sin D =$

(i) $\frac{1}{\cot D}$ (ii) $\frac{1}{\cos D}$ (iii) $\frac{1}{\operatorname{cosec} D}$ (iv) $\frac{1}{\sec D}$ (v) $\frac{1}{\tan D}$

14. $\cos B =$

(i) $\frac{1}{\operatorname{cosec} B}$ (ii) $\frac{1}{\sin B}$ (iii) $\frac{1}{\cot B}$ (iv) $\frac{1}{\sec B}$ (v) $\frac{1}{\tan B}$

15. $\tan D =$

(i) $\frac{1}{\sec D}$ (ii) $\frac{1}{\cot D}$ (iii) $\frac{1}{\sin D}$ (iv) $\frac{1}{\operatorname{cosec} D}$ (v) $\frac{1}{\cos D}$

16. $\cot A =$

(i) $\frac{1}{\sin A}$ (ii) $\frac{1}{\tan A}$ (iii) $\frac{1}{\operatorname{cosec} A}$ (iv) $\frac{1}{\cos A}$ (v) $\frac{1}{\sec A}$

17. $\sec K =$

(i) $\frac{1}{\operatorname{cosec} K}$ (ii) $\frac{1}{\tan K}$ (iii) $\frac{1}{\cot K}$ (iv) $\frac{1}{\cos K}$ (v) $\frac{1}{\sin K}$

18. $\operatorname{cosec} I =$

(i) $\frac{1}{\cos I}$ (ii) $\frac{1}{\sec I}$ (iii) $\frac{1}{\sin I}$ (iv) $\frac{1}{\tan I}$ (v) $\frac{1}{\cot I}$

19. In $\triangle IJK$, right angled at $J$, if $IJ = 35$ cm and $JK = 12$ cm, find $\sin I$

(i) $\frac{12}{35}$ (ii) $\frac{4}{13}$ (iii) $\frac{14}{37}$ (iv) $\frac{12}{37}$ (v) $\frac{10}{37}$

20. In $\triangle IJK$, right angled at $J$, if $IJ = 24$ cm and $JK = 10$ cm, find $\cos I$

(i) $\frac{12}{13}$ (ii) $\frac{12}{11}$ (iii) $\frac{14}{13}$ (iv) $\frac{4}{5}$ (v) $\frac{10}{13}$

21. In $\triangle DEF$, right angled at $E$, if $DE = 8$ cm and $EF = 6$ cm, find $\tan D$

(i) $\frac{3}{4}$ (ii) $\frac{3}{2}$ (iii) $\frac{5}{4}$ (iv) $\frac{1}{2}$ (v) $\frac{1}{4}$

22. In $\triangle OPQ$, right angled at $P$, if $OP = 8$ cm and $PQ = 6$ cm, find $\cot O$

(i) $\frac{4}{3}$ (ii) $\frac{4}{5}$ (iii) 4 (iv) 2 (v) $\frac{2}{3}$

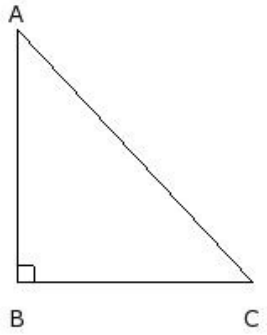
23. In $\triangle EFG$, right angled at $F$, if $EF = 35$ cm and $FG = 12$ cm, find $\sec E$

(i) $\frac{37}{33}$ (ii) 1 (iii) $\frac{37}{35}$ (iv) $\frac{39}{35}$

24. In $\triangle ABC$, right angled at B, if AB = 35 cm and BC = 12 cm, find cosec A

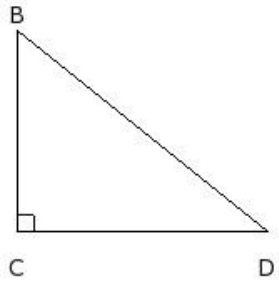
(i) $\frac{37}{10}$ (ii) $\frac{37}{14}$ (iii) $\frac{37}{12}$ (iv) $\frac{35}{12}$ (v) $\frac{13}{4}$

25. From the given figure, find $\sin(90 - A)$



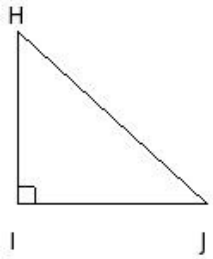

(i) $\frac{AC}{BC}$ (ii) $\frac{BC}{AC}$ (iii) $\frac{BC}{AB}$ (iv) $\frac{AB}{AC}$ (v) $\frac{AB}{BC}$

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



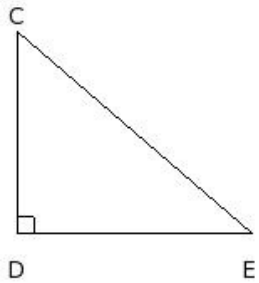

(i) $\frac{CD}{BC}$ (ii) $\frac{BC}{CD}$ (iii) $\frac{BD}{CD}$ (iv) $\frac{BC}{BD}$ (v) $\frac{CD}{BD}$

27. From the given figure, find $\tan(90 - J)$



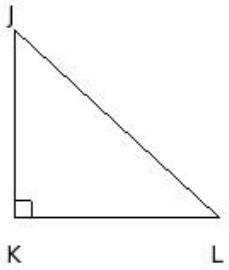

(i) $\frac{HJ}{IJ}$ (ii) $\frac{IJ}{HJ}$ (iii) $\frac{IJ}{HI}$ (iv) $\frac{HJ}{HI}$ (v) $\frac{HI}{HJ}$

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



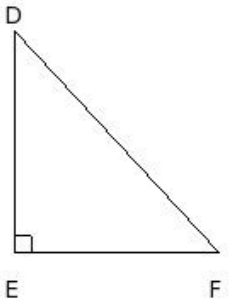

(i) $\frac{CD}{DE}$ (ii) $\frac{CE}{CD}$ (iii) $\frac{CE}{DE}$ (iv) $\frac{CD}{CE}$ (v) $\frac{DE}{CD}$

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




(i) $\frac{JK}{KL}$ (ii) $\frac{JK}{JL}$ (iii) $\frac{JL}{JK}$ (iv) $\frac{JL}{KL}$ (v) $\frac{KL}{JK}$

30. From the given figure, find $\cot(90 - D)$




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

## Assignment Key

| | | | | | |
|---|---|---|---|---|---|
| 1) (v) | 2) (ii) | 3) (v) | 4) (i) | 5) (iv) | 6) (ii) |
| 7) (iv) | 8) (ii) | 9) (iii) | 10) (ii) | 11) (iii) | 12) (i) |
| 13) (iii) | 14) (iv) | 15) (ii) | 16) (ii) | 17) (iv) | 18) (iii) |
| 19) (iv) | 20) (i) | 21) (i) | 22) (i) | 23) (iii) | 24) (iii) |
| 25) (iv) | 26) (iv) | 27) (iii) | 28) (iii) | 29) (iv) | 30) (v) |

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