EduSahara™ Assignment

Name : Trigonometry Diagram Problems

Chapter : Trigonometry

Grade : SSC Grade X

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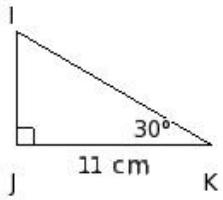
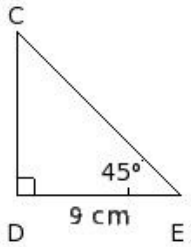
1. In the given figure, △IJK is right angled at J. If JK = 11 cm and ∠K = 30°, find IJ and IK



(i) $\frac{11}{3}\sqrt{3}$ cm & $\frac{22}{3}\sqrt{3}$ cm (ii) $\frac{11}{3}\sqrt[4]{3}$ cm & $\frac{22}{3}\sqrt{3}$ cm (iii) $\frac{11}{3}\sqrt[4]{3}$ cm & 25 cm (iv) $\frac{11}{3}\sqrt[4]{3}$ cm & 22 cm

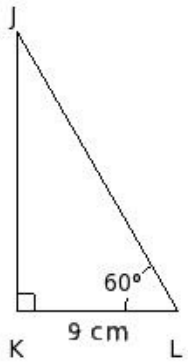
(v) $\frac{11}{3}$ cm & 25 cm

2. In the given figure, △CDE is right angled at D. If DE = 9 cm and ∠E = 45°, find CD and CE



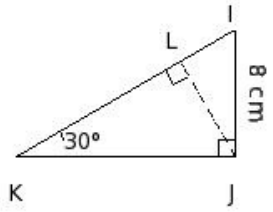
(i) 10 cm & 21 cm (ii) 10 cm & $9\sqrt{2}$ cm (iii) 8 cm & 21 cm (iv) 10 cm & 18 cm (v) 9 cm & $9\sqrt{2}$ cm

3. In the given figure, △JKL is right angled at K. If KL = 9 cm and ∠L = 60°, find JK and JL



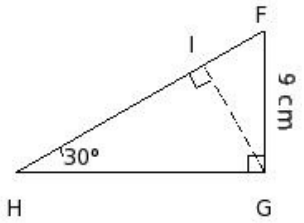
(i) $9\sqrt[4]{3}$ cm & 19 cm (ii) $9\sqrt{3}$ cm & 18 cm (iii) 9 cm & 19 cm (iv) $9\sqrt[4]{3}$ cm & 17 cm (v) $9\sqrt[4]{3}$ cm & 18 cm

4. In the given figure, △IKJ is right angled at J. If IJ = 8 cm and ∠K = 30°, find IK



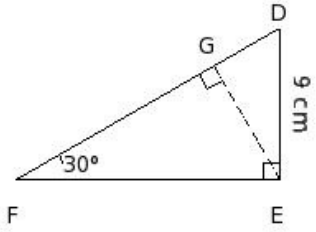
(i) 16 cm (ii) 18 cm (iii) 15 cm (iv) 17 cm (v) 13 cm

5. In the given figure, △FHG is right angled at G. If FG = 9 cm and ∠H = 30°, find GH



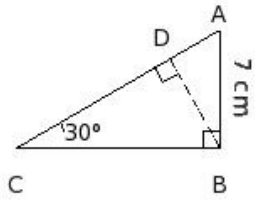
(i) 9 cm (ii) $\frac{27}{2}\sqrt{2}$ cm (iii) 27 cm (iv) $9\sqrt{18}$ cm (v) $9\sqrt{3}$ cm

6. In the given figure, △DFE is right angled at E. If DE = 9 cm and ∠F = 30°, find DG



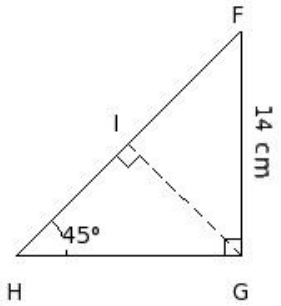
(i) $\frac{7}{2}$ cm (ii) $\frac{9}{2}$ cm (iii) $\frac{11}{2}$ cm (iv) 5 cm (v) $\frac{17}{4}$ cm

7. In the given figure, △ACB is right angled at B. If AB = 7 cm and ∠C = 30°, find CD



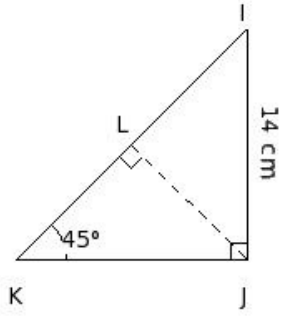
(i) 21 cm (ii) $\frac{23}{2}$ cm (iii) $\frac{21}{4}$ cm (iv) $\frac{21}{2}$ cm (v) $\frac{19}{2}$ cm

8. In the given figure, △FHG is right angled at G. If FG = 14 cm and ∠H = 45°, find FH



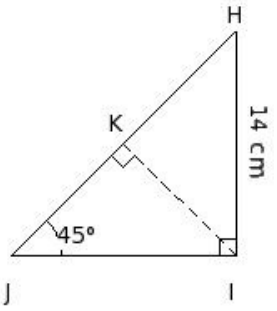
(i) 28 cm (ii) 14 cm (iii) $14\sqrt{2}$ cm (iv) $28\sqrt{3}$ cm (v) $7\sqrt{12}$ cm

9. In the given figure, △IKJ is right angled at J. If IJ = 14 cm and ∠K = 45°, find JK



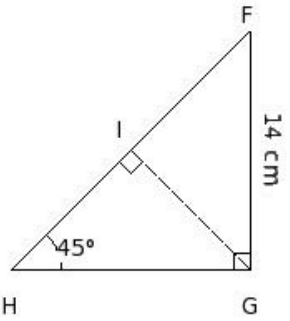
(i) 14 cm (ii) 16 cm (iii) 13 cm (iv) 15 cm (v) 11 cm

10. In the given figure, △HJI is right angled at I. If HI = 14 cm and ∠J = 45°, find HK



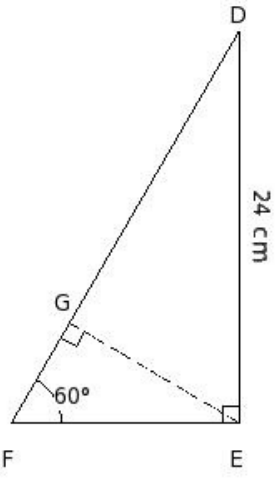
(i) $\frac{7}{2}\sqrt{12}$ cm (ii) 7 cm (iii) 14 cm (iv) $14\sqrt{3}$ cm (v) $7\sqrt{2}$ cm

11. In the given figure, △FHG is right angled at G. If FG = 14 cm and ∠H = 45°, find HI



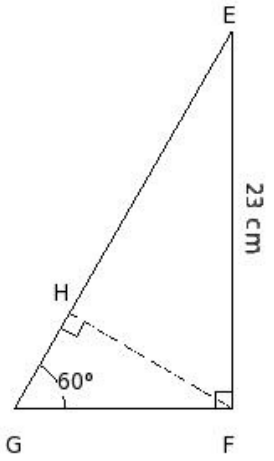
(i) 7 cm (ii) 14 cm (iii) $7\sqrt{2}$ cm (iv) $14\sqrt{3}$ cm (v) $\frac{7}{2}\sqrt{12}$ cm

12. In the given figure, △DFE is right angled at E. If DE = 24 cm and ∠F = 60°, find DF



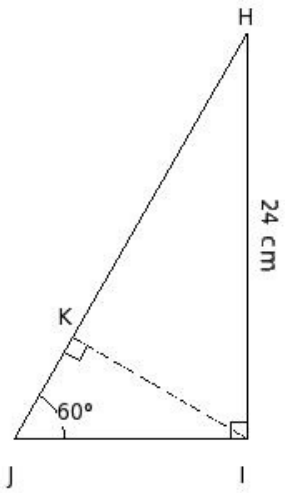
(i) $16\sqrt{18}$ cm (ii) 16 cm (iii) 48 cm (iv) $16\sqrt{3}$ cm (v) $24\sqrt{2}$ cm

13. In the given figure, △EGF is right angled at F. If EF = 23 cm and ∠G = 60°, find FG



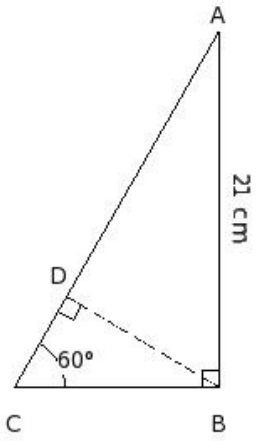
(i) $\frac{23}{3}$ cm (ii) $\frac{23}{3}\sqrt{18}$ cm (iii) $\frac{23}{3}\sqrt{3}$ cm (iv) $\frac{23}{2}\sqrt{2}$ cm (v) 23 cm

14. In the given figure, △HJI is right angled at I. If HI = 24 cm and ∠J = 60°, find HK



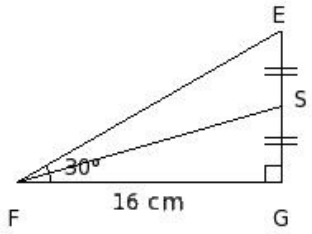
(i) $18\sqrt{2}$ cm (ii) $12\sqrt{18}$ cm (iii) 12 cm (iv) $12\sqrt{3}$ cm (v) 36 cm

15. In the given figure, △ACB is right angled at B. If AB = 21 cm and ∠C = 60°, find CD



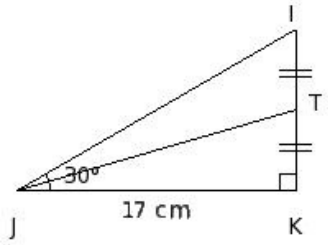
(i) $\frac{21}{2}$ cm (ii) $\frac{7}{2}\sqrt{18}$ cm (iii) $\frac{7}{2}\sqrt{3}$ cm (iv) $\frac{21}{4}\sqrt{2}$ cm (v) $\frac{7}{2}$ cm

16. In the given figure, △EFG is a right angle triangle with ∠G = 90° and FG = 16 cm. S is the mid-point of EG. Find SG



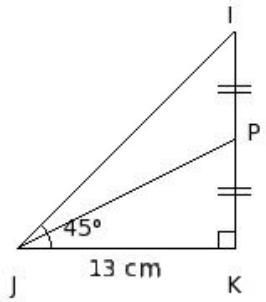
(i) $\frac{8}{3}\sqrt{18}$ cm (ii) 8 cm (iii) $\frac{8}{3}$ cm (iv) $\frac{8}{3}\sqrt{3}$ cm (v) $4\sqrt{2}$ cm

17. In the given figure, △IJK is a right angle triangle with ∠K = 90° and JK = 17 cm. T is the mid-point of IK. Find the length of the altitude from K to IJ.



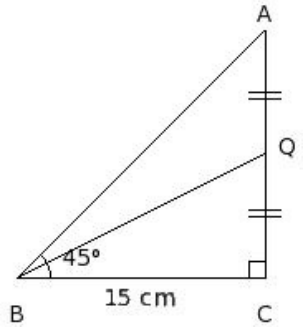
(i) $\frac{15}{2}$ cm (ii) $\frac{33}{4}$ cm (iii) $\frac{17}{2}$ cm (iv) 9 cm (v) $\frac{19}{2}$ cm

18. In the given figure, △IJK is a right angle triangle with ∠K = 90° and JK = 13 cm. P is the mid-point of IK. Find PK



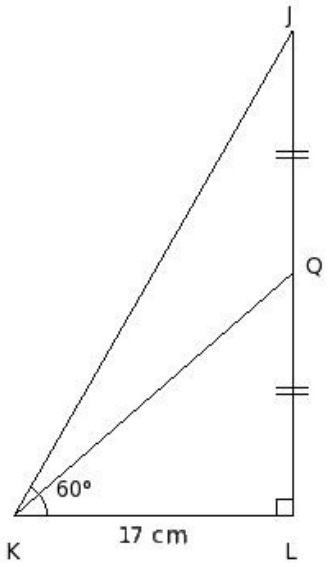
(i) $\frac{13}{2}$ cm (ii) 7 cm (iii) $\frac{15}{2}$ cm (iv) $\frac{25}{4}$ cm (v) $\frac{11}{2}$ cm

19. In the given figure, △ABC is a right angle triangle with ∠C = 90° and BC = 15 cm. Q is the mid-point of AC. Find the length of the altitude from C to AB.



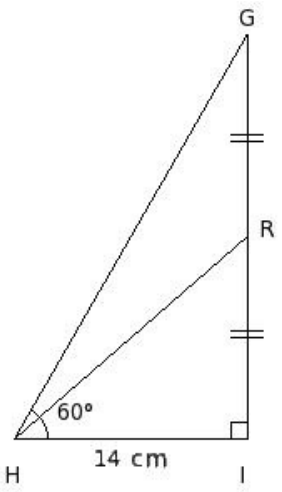
(i) $\frac{15}{2}\sqrt{2}$ cm (ii) 15 cm (iii) $\frac{15}{4}\sqrt{12}$ cm (iv) $\frac{15}{2}$ cm (v) $15\sqrt{3}$ cm

20. In the given figure, △JKL is a right angle triangle with ∠L = 90° and KL = 17 cm. Q is the mid-point of JL. Find QL



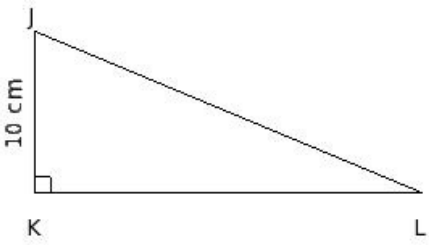
(i) $\frac{17}{2}$ cm (ii) $\frac{51}{2}$ cm (iii) $\frac{17}{2}\sqrt{3}$ cm (iv) $\frac{17}{2}\sqrt{18}$ cm (v) $\frac{51}{4}\sqrt{2}$ cm

21. In the given figure, △GHI is a right angle triangle with ∠I = 90° and HI = 14 cm. R is the mid-point of GI. Find the length of the altitude from I to GH.



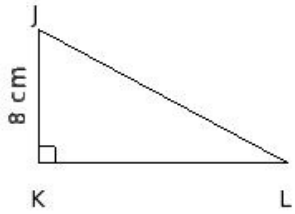
(i) $7\sqrt{18}$ cm (ii) 21 cm (iii) $7\sqrt{3}$ cm (iv) $\frac{21}{2}\sqrt{2}$ cm (v) 7 cm

22. In the given figure, if $JL - KL = 2$ cm, and $JK = 10$ cm, find $\sin J$



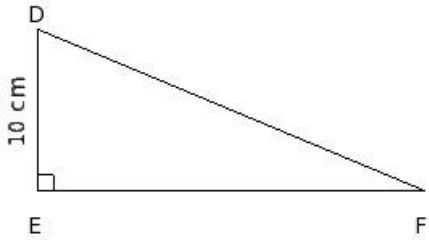
(i) $\frac{12}{11}$ (ii) $\frac{14}{13}$ (iii) $\frac{4}{5}$ (iv) $\frac{12}{13}$ (v) $\frac{10}{13}$

23. In the given figure, if $JL - KL = 2$ cm, and $JK = 8$ cm, find $\cos J$



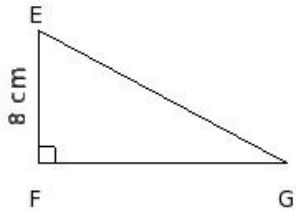
(i) $\frac{8}{15}$ (ii) $\frac{10}{17}$ (iii) $\frac{6}{17}$ (iv) $\frac{8}{17}$ (v) $\frac{8}{19}$

24. In the given figure, if $DF - EF = 2$ cm, and $DE = 10$ cm, find $\tan D$



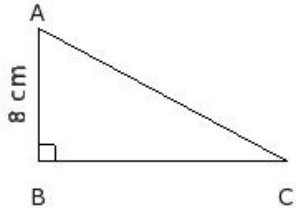
(i) $\frac{14}{5}$ (ii) 2 (iii) $\frac{12}{5}$ (iv) $\frac{12}{7}$ (v) 4

25. In the given figure, if $EG + FG = 32$ cm, and $EF = 8$ cm, find $\sin E$



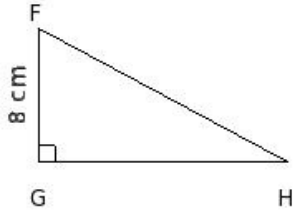
(i) $\frac{13}{17}$ (ii) 1 (iii) $\frac{15}{19}$ (iv) $\frac{15}{17}$

26. In the given figure, if $AC + BC = 32$ cm, and $AB = 8$ cm, find $\cos A$



(i) $\frac{10}{17}$ (ii) $\frac{8}{15}$ (iii) $\frac{8}{17}$ (iv) $\frac{6}{17}$ (v) $\frac{8}{19}$

27. In the given figure, if $FH + GH = 32$ cm, and $FG = 8$ cm, find $\tan F$



(i) $\frac{5}{2}$ (ii) $\frac{17}{8}$ (iii) $\frac{15}{8}$ (iv) $\frac{3}{2}$ (v) $\frac{13}{8}$

Assignment Key

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