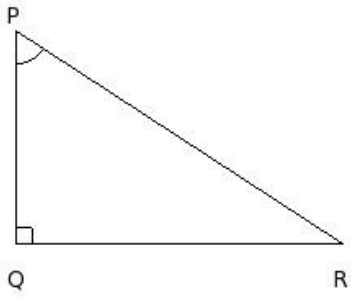
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Pythagoras Theorem

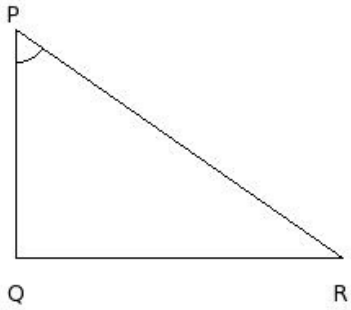
Grade : ICSE Grade IX

1. In a right angled triangle △PQR, if QR = 20 cm, PQ = 13 cm are the lengths of perpendicular sides , then corresponding height of side QR =



(i) 10.00 cm (ii) 13.00 cm (iii) 18.00 cm (iv) 8.00 cm (v) 16.00 cm

2. In a right angled triangle △PQR, if QR = 20 cm, PQ = 14 cm are the lengths of perpendicular sides , then area of the triangle =

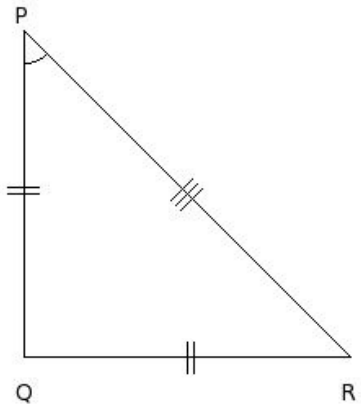


(i) 168.00 sq.cm (ii) 152.00 sq.cm (iii) 123.00 sq.cm (iv) 117.00 sq.cm (v) 140.00 sq.cm

3. In a right angled triangle, if one of the angles is 40.6°, find the third angle

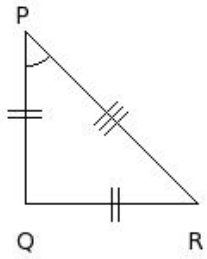
(i) 49.4° (ii) 79.4° (iii) 54.4° (iv) 59.4° (v) 64.4°

4. In an isosceles right angled triangle △PQR, if area = 200 sq.cm, then corresponding height of side PQ =



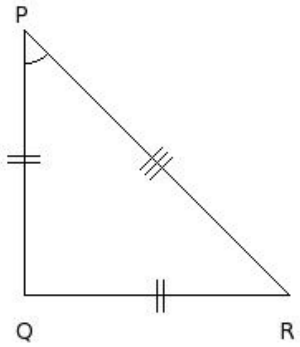
(i) 23.00 cm (ii) 15.00 cm (iii) 20.00 cm (iv) 25.00 cm (v) 17.00 cm

5. In an isosceles right angled triangle △PQR, if perimeter = 34.14 cm, then side PQ =



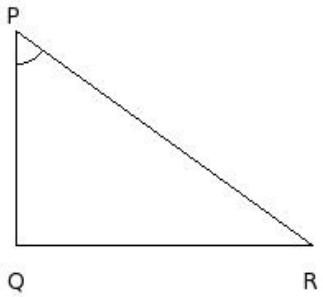
(i) 5.00 cm (ii) 13.00 cm (iii) 10.00 cm (iv) 7.00 cm (v) 15.00 cm

6. In an isosceles right angled triangle △PQR, if RP = 22.63 cm is the hypotenuse, then area of the triangle =



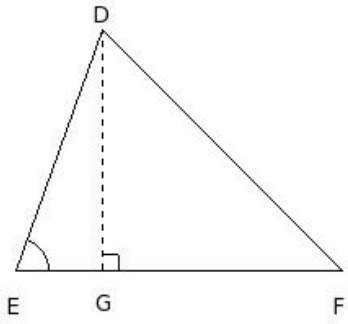
(i) 100.00 sq.cm (ii) 128.00 sq.cm (iii) 122.00 sq.cm (iv) 146.00 sq.cm (v) 131.00 sq.cm

7. In a right angled triangle △PQR, if the area is 117 sq.cm and base QR = 18 cm, then side PQ =



(i) 13.00 cm (ii) 16.00 cm (iii) 10.00 cm (iv) 18.00 cm (v) 8.00 cm

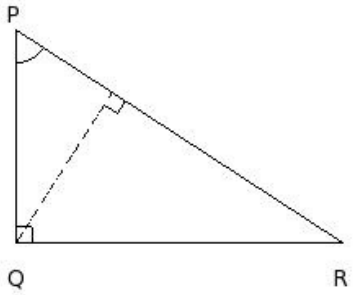
8. In the given figure, △DEF is an acute angled triangle and DG ⊥ EF. Then



(i) $DF^2 = DE^2 + EF^2 + 2DE.EF$ (ii) $DF^2 = DE^2 + EF^2 - 2DE.EF$ (iii) $DF^2 = DE^2 + EF^2 + 2EF.EG$

(iv) $DF^2 = DE^2 + EF^2 - 2EF.EG$ (v) $DF^2 = DE^2 + EF^2 - DG^2$

9. In a right angled triangle △PQR, if the area is 130 sq.cm and corresponding height of side QR = 13 cm, then corresponding height of side RP =

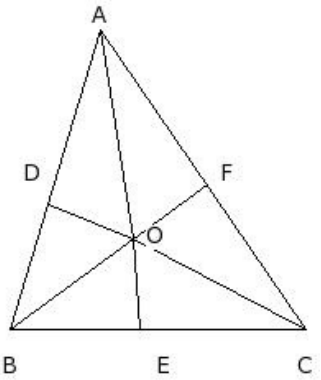


(i) 15.90 cm (ii) 10.90 cm (iii) 5.90 cm (iv) 13.90 cm (v) 7.90 cm

10. In a right angled triangle, if the two non-hypotenuse sides are 14 cm and 48 cm, find the hypotenuse

(i) 50.00 cm (ii) 51.00 cm (iii) 49.00 cm (iv) 52.00 cm (v) 48.00 cm

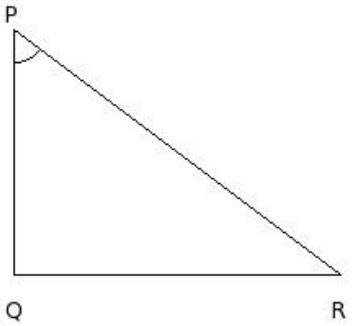
11. In the given figure, ABC is a triangle and 'O' is a point inside △ABC. The angular bisector of ∠BOA, ∠COB & ∠AOC meet AB, BC & CA at D, E & F respectively . Then



(i) AD . BE . CF = AB . BC . CA (ii) AD . BE . CF = OD . OE . OF (iii) AD . BE . CF = DB . EC . FA

(iv) AD . BE . CF = OA . OB . OC (v) AD . BE . CF = DE . EF . FD

12. In a right angled triangle △PQR, if the area is 150 sq.cm and base QR = 20 cm, then side RP =



(i) 28.00 cm (ii) 25.00 cm (iii) 20.00 cm (iv) 30.00 cm (v) 22.00 cm

13. In the given figure, △BCD , E is the mid-point of CD and BF ⊥ CD. Which of the following are true?

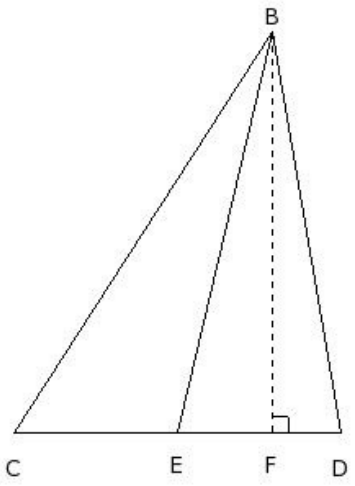
a) $BD^2 = BE^2 + CD.EF + \frac{1}{4} CD^2$

b) $BC^2 + BD^2 = 2\,BE^2 + \frac{1}{2} CD^2$

c) $BC^2 = BE^2 - CD.EF + \frac{1}{4} CD^2$

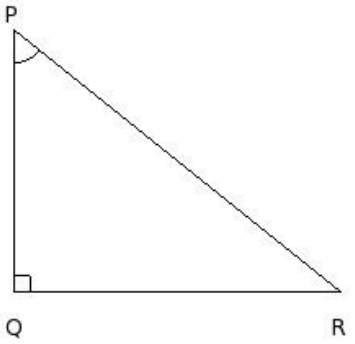
d) $BC^2 = BF^2 - CD.EF + \frac{1}{4} CD^2$

e) $BD^2 = BF^2 + CD.EF + \frac{1}{4} CD^2$



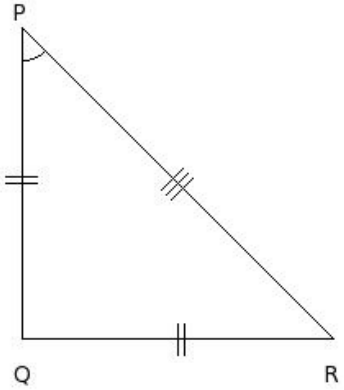
(i) {a,b,c} (ii) {d,a} (iii) {d,e,c} (iv) {e,b} (v) {d,a,b}

14. In a right angled triangle △PQR, if the area is 160 sq.cm and corresponding height of side QR = 16 cm, then side RP =



(i) 25.61 cm (ii) 30.61 cm (iii) 20.61 cm (iv) 22.61 cm (v) 28.61 cm

15. In an isosceles right angled triangle △PQR, if area = 180.5 sq.cm, then side RP =

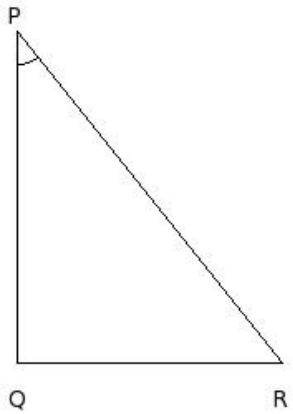


(i) 23.87 cm (ii) 26.87 cm (iii) 31.87 cm (iv) 21.87 cm (v) 29.87 cm

16. The altitude and area of an equilateral triangle of side 'a' is

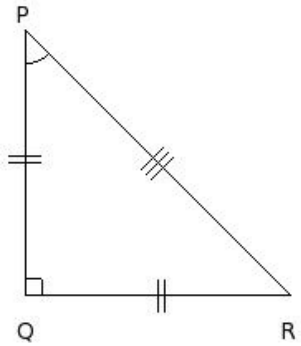
(i) $\sqrt{3}$ a, $\frac{1}{2}\sqrt{3}$ a^2 (ii) $\frac{1}{2}\sqrt{3}$ a, $\frac{1}{2}\sqrt{3}$ a^2 (iii) $\frac{1}{2}\sqrt{3}$ a, $\frac{1}{4}\sqrt{3}$ a^2 (iv) $\sqrt{3}$ a, $\frac{1}{2}\sqrt{3}$ a

17. In a right angled triangle △PQR, if QR = 16 cm is one of the perpendicular sides and RP = 25.61 cm is the hypotenuse, then area of the triangle =



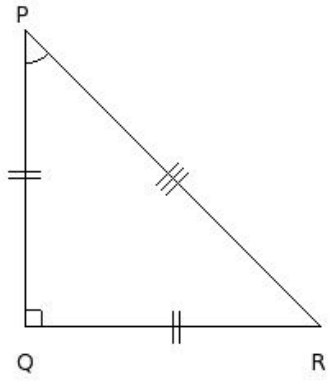
(i) 160.00 sq.cm (ii) 187.00 sq.cm (iii) 175.00 sq.cm (iv) 147.00 sq.cm (v) 142.00 sq.cm

18. In an isosceles right angled triangle △PQR, if corresponding height to the base QR is 16 cm, then corresponding height of side PQ =



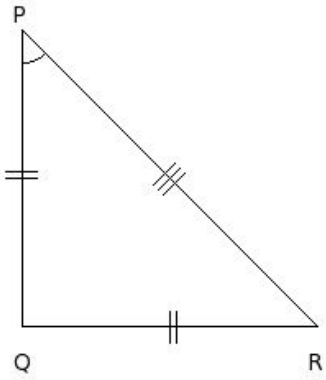
(i) 21.00 cm (ii) 16.00 cm (iii) 19.00 cm (iv) 13.00 cm (v) 11.00 cm

19. In an isosceles right angled triangle △PQR, if corresponding height to the base QR is 18 cm, then corresponding height of side QR =



(i) 18.00 cm (ii) 15.00 cm (iii) 21.00 cm (iv) 13.00 cm (v) 23.00 cm

20. In an isosceles right angled triangle △PQR, if RP = 25.46 cm is the hypotenuse, then side QR =

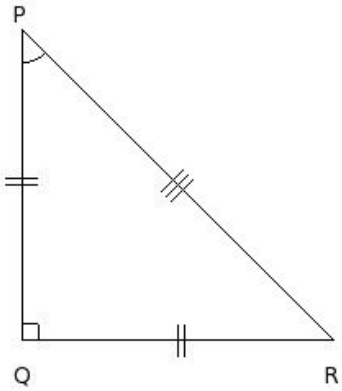


(i) 15.00 cm (ii) 13.00 cm (iii) 21.00 cm (iv) 18.00 cm (v) 23.00 cm

21. In a right angled triangle, if one of the angles is 40.6°, find the third angle

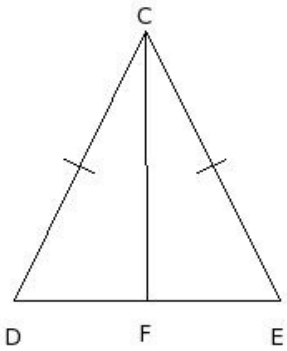
(i) 59.4° (ii) 79.4° (iii) 64.4° (iv) 49.4° (v) 54.4°

22. In an isosceles right angled triangle △PQR, if corresponding height to the base QR is 19 cm, then side PQ =



(i) 22.00 cm (ii) 24.00 cm (iii) 16.00 cm (iv) 14.00 cm (v) 19.00 cm

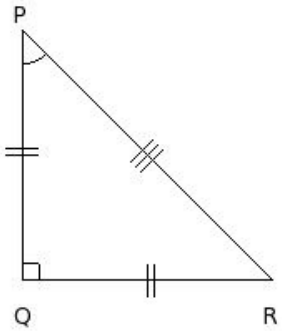
23. In the given figure, △CDE is a triangle in which CD = CE and F is a point on DE. Then



(i) $CD^2 + CF^2 = DE^2$ (ii) $CD^2 - CF^2 = CF.EF$ (iii) $CD^2 + CF^2 = DF.EF$ (iv) $CD^2 - CF^2 = CF.DF$

(v) $CD^2 - CF^2 = DF.EF$

24. In an isosceles right angled triangle △PQR, if corresponding height to the base QR is 15 cm, then side QR =



(i) 18.00 cm (ii) 15.00 cm (iii) 12.00 cm (iv) 20.00 cm (v) 10.00 cm

25. In an equilateral triangle ABC, the side BC is trisected at D. Then

(i) $7\ AD^2 = 9\ AB^2$ (ii) $9\ AD^2 = 7\ AB^2$ (iii) $7\ AD^2 = 3\ AB^2$ (iv) $3\ AD^2 = 7\ AB^2$

Assignment Key

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