

**Mark (✓) against the correct answer in each of the following.**

1. What is the length of the hypotenuse of an isosceles right triangle whose equal sides each has length 12 cm? [Use  $\sqrt{2} = 1.4$ ]  
(a) 16.8 cm                      (b) 17.2 cm                      (c) 17.6 cm                      (d) 21.4 cm
2. The hypotenuse of an isosceles right triangle is  $17\sqrt{2}$  cm. The length of each equal side is  
(a) 8.5 cm                      (b) 14 cm                      (c) 17 cm                      (d) 23 cm
3. The length of the hypotenuse of an isosceles right triangle is  $18\sqrt{2}$  cm. The area of the square composed of two such triangles is  
(a)  $162 \text{ cm}^2$                       (b)  $324 \text{ cm}^2$                       (c)  $486 \text{ cm}^2$                       (d)  $648 \text{ cm}^2$
4.  $\triangle ABC$  is right-angled at A. If  $AB = 24$  cm and  $AC = 7$  cm then  $BC = ?$   
(a) 31 cm                      (b) 17 cm                      (c) 25 cm                      (d) 28 cm
5. A ladder is placed in such a way that its foot is 15 m away from the wall and its top reaches a window 20 m above the ground. The length of the ladder is  
(a) 35 m                      (b) 25 m                      (c) 18 m                      (d) 17.5 m
6. Two poles of heights 6 m and 11 m stand vertically on a plane ground. If the distance between their feet is 12 m, what is the distance between their tops?  
(a) 13 m                      (b) 14 m                      (c) 15 m                      (d) 12.8 m
7.  $\triangle ABC$  is an isosceles triangle with  $\angle C = 90^\circ$  and  $AC = 5$  cm. Then,  $AB = ?$   
(a) 2.5 cm                      (b) 5 cm                      (c) 10 cm                      (d)  $5\sqrt{2}$  cm
8. Find the length of each side of a rhombus whose diagonals are of lengths 30 cm and 16 cm respectively.  
(a) 12 cm                      (b) 15 cm                      (c) 17 cm                      (d) 19 cm
9. The length of each side of a rhombus is 61 cm. If the length of one diagonal is 120 cm, find the length of the other.  
(a) 11 cm                      (b) 22 cm                      (c) 13 cm                      (d) 26 cm
10. Which one of the following is a primitive Baudhayana triple?  
(a) (12, 16, 20)                      (b) (7, 12, 15)                      (c) (8, 15, 17)                      (d) (15, 36, 39)

**11. Fill in the blanks.**

- (i) If we construct a square using the diagonal of the original square as one of its sides, the new square will have ..... times the area of the original square.
- (ii) If we construct a square using the mid-points of the sides of the original square, the new square will have ..... the area of the original square.
- (iii) If the length of the hypotenuse of an isosceles right triangle is  $m$  units, then the length of each equal side is ..... units.
- (iv) If  $d_1$  and  $d_2$  are the lengths of the diagonals of a rhombus then the length of each side is .....
- (v) If (7, 24,  $m$ ) is a primitive Baudhayana triple then the value of  $m$  is .....

**12. Write (T) for true and (F) for false for each of the following.**

- (i) If  $(a, b, c)$  is a primitive Baudhayana triple then the HCF of  $a, b$  and  $c$  is 1.
- (ii) If  $(a, b, c)$  is a Baudhayana triple then  $(ma, mb, mc)$  is also a Baudhayana triple where  $m$  is a positive integer.
- (iii)  $(9, 13, 21)$  is a nonprimitive Baudhayana triple.