Wada Nirmiti Education Society's

GURUKUL GLOBAL SCHOOL

WORKSHEET

SUB: MATHS LESSON: 2 – THE BAUDHAYANA – PYTHAGORAS THEOREM STD: VIII

NAME: _____ ROLL No: _____ DATE:

Q. MULTIPLE CHOICE QUESTIONS:

1. In a right-angled triangle, if one side is 6 cm and the other is 8 cm, the hypotenuse is:
   a) 10 cm b) 12 cm c) 14 cm d) 9 cm
2. The Pythagoras theorem states:
   a) $a^2 + b^2 = c$ b) $a + b = c^2$ c) $a^2 + b^2 = c^2$ d) $a^2 - b^2 = c^2$
3. If the hypotenuse is 13 cm and one side is 5 cm, the other side is:
   a) 8 cm b) 10 cm c) 12 cm d) 9 cm
4. Which of the following is a BAUDHĀYANA PYTHAGORAS triplet?
   a) 3, 4, 5 b) 2, 3, 4 c) 5, 6, 7 d) 4, 5, 6
5. If the sides of a triangle are 7 cm, 24 cm, and 25 cm, then the triangle is:
   a) Right-angled b) Acute-angled c) Obtuse-angled d) Equilateral
6. A ladder 10 m long is placed against a wall. If its foot is 6 m from the wall, the height it reaches is:
   a) 8 m b) 7 m c) 6 m d) 5 m
7. If one leg of a right triangle is 9 cm and hypotenuse is 15 cm, the other leg is:
   a) 12 cm b) 10 cm c) 11 cm d) 13 cm
8. The square of the hypotenuse is equal to:
   a) Product of other two sides b) Sum of squares of other two sides
   c) Difference of squares d) Twice the sum of sides
9. Which of the following sets cannot form a right triangle?
   a) 8, 15, 17 b) 6, 8, 12 c) 5, 12, 13 d) 9, 40, 41
10. **Assertion (A):** The diagonal of a square can be found using Pythagoras theorem.
    Reason (R): The diagonal divides the square into two right-angled triangles.
    Choose the correct option:
    A. Both A and R are true and R is the correct explanation of A
    B. Both A and R are true but R is not the correct explanation of A
    C. A is true but R is false
    D. A is false and R is also false

Q. SHORT ANSWER TYPE QUESTIONS:

11. Find the hypotenuse of this isosceles right triangle having side 3 cm?
12. If the hypotenuse of an isosceles right triangle is 72 cm , find its other two sides
13. If a right-angled triangle has shorter sides of lengths 5 cm and 12 cm, then what is the length of its hypotenuse?
14. List down all the Baudhāyana triples with numbers less than or equal to 20.

Q. LONG ANSWER TYPE QUESTIONS:

15. If (a, b, c) is a Baudhāyana triple, then (ka, kb, kc) is also a Baudhāyana triple where k is any positive integer. Is this statement true? Justify your answer by taking an example
16. Generate 5 scaled versions of (12,5,13) primitive triples. Are these scaled versions primitive?
17. In a lake surrounded by chakra and krauñcha birds, there is a lotus flower peeping out of the water, with the tip of its stem 1 unit above the water. On being swayed by a gentle breeze, the tip touches the water 3 units away from its original position. Find the depth of the lake.

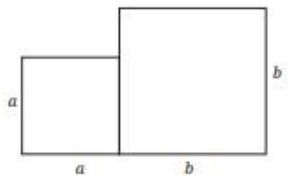
18. (a) Construct a square whose area is equal to the difference of the areas of squares of side lengths 5 units and 7 units

    (b) Find the side length of a rhombus whose diagonals are of length 24 units and 70 units.

Q. CASE – BASED QUESTIONS:

19. Write the steps with diagram how you cut the given squares of side a and b to get a big square of side length

(a2+b2)1/2



20. During a storm, a 25-meter high tree breaks at a certain height from the ground. The top of the broken tree touches the ground 15 meters away from the base of the tree. The broken part forms a right-angled triangle with the ground and the unbroken part.
    (a) What is the length of the broken part ?
    (b) If the tree broke at a height of 12 m from the ground, what would be the distance of the top from the base?