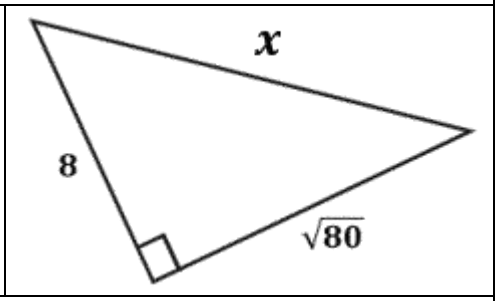
INDIAN SCHOOL AL WADI AL KABIR
Class VIII, Mathematics (2026-27)
Worksheet DTQ
THE BAUDHAYANA-PYTHAGORAS THEOREM

SHORT ANSWER TYPE QUESTIONS- 7 QUESTIONS. (2 Marks each)	
Q1.	A carpenter is making a triangular wooden frame for a window. The two equal sides of the frame are each 6 cm long, and the angle between them is 90°. Find the length of the hypotenuse.
Q2.	Check whether 5, 12 and 13 form a Pythagorean triplet (show working).
Q3.	The hypotenuse of an isosceles right triangle is 12 cm. Find the lengths of the other two equal sides.
Q4.	An architect is designing a triangular support structure for a building using three metal rods measuring 12 m, 35 m and 37 m. Verify whether these lengths form a Baudhayana triplet (show working).
Q5.	A gardener designs a triangular flower bed in the shape of an isosceles right triangle. The two equal sides measure 10 m each. Find the length of the third side (hypotenuse).
Q6.	Observe the adjoining triangle and find the value of x 
Q7.	A company manufactures equilateral triangular road sign-boards. If each side of a sign-board measures 10 cm, calculate its area.
SHORT ANSWER TYPE- 5 QUESTIONS. (3 Marks each)	
Q8.	A ladder is placed against a wall. The foot of the ladder is 8 m away from the wall, and its top touches the wall at a height of 15 m. Find the length of the ladder.
Q9.	A rectangular park is 12 m long and 9 m wide. Find the length of its diagonal path.
Q10.	A student makes a triangular flag for a school exhibition. The two equal sides of the flag are 8 cm each, and they meet at a right angle. Find the length of the hypotenuse.
Q11.	A boy walks 7 m towards the east and then 24 m towards the north. Find the shortest distance between his starting point and his final position.
Q12.	A triangular garden is in the shape of an isosceles right triangle. Its hypotenuse measures 14 m. Find the length of each of the other two equal sides.
LONG ANSWER TYPE- 3 QUESTIONS. (4 Marks each)	
Q13.	Jenny cuts a piece of cardboard to make a triangular design. The piece is in the shape of an isosceles right-angled triangle with a hypotenuse of $\sqrt{200}$ cm. Find the lengths of the two equal sides.

Q14.	A designer creates a diamond-shaped wall hanging to decorate a wall. Its diagonals measure 16 cm and 30 cm. Find the length of each side of the rhombus.
Q15.	**CASE STUDY:** A school has a rectangular playground where students practice outdoor games. A diagonal pathway runs from one corner of the playground to the opposite corner. The length of the diagonal pathway is 25 m, and the width of the playground is 7 m. The school wants to calculate the dimensions and perimeter of the playground to plan fencing around it.  Answer the following questions: a) Which mathematical theorem can be used to find the length of the playground? b) Find the length of the playground using the given measurements. c) Calculate the perimeter of the rectangular playground. d) Find the area of the playground. e) If fencing is required along the entire boundary at ₹50 per metre, calculate the total cost of fencing.

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ANSWERS							
Q1.	$6\sqrt{2}$ cm	Q2.	yes	Q3.	$6\sqrt{2}$ cm	Q4.	yes
Q5.	$10\sqrt{2}$ m	Q6.	$x = 12$units	Q7.	$25\sqrt{3}$ sq cm	Q8.	17 m
Q9.	15m	Q10.	$8\sqrt{2}$ cm	Q11	25 m	Q12.	$7\sqrt{2}$ m
Q13.	10 cm	Q14.	17 cm	Q15.	a) Pythagorean theorem b) 24 m c) 62 m d) 168 m² e) ₹3,100		