

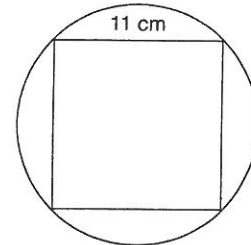
Name: _____

Group: _____ Date: _____



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1. A square with side 11 cm is inscribed in a circle. What is the diameter of the circle?



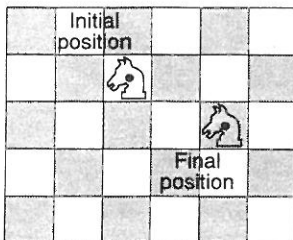
2. Jean-Charles states that the Pythagorean Theorem can be applied to an isosceles triangle. Lori disagrees: she is sure that it applies to right triangles only. Who is right? Explain.

3. Marcia asks two of her friends to explain the Pythagorean Theorem. The first says: "The hypotenuse squared is equal to the sum of the squares of the legs." The second says: "The square root of the sum of the squares of the legs is equal to the hypotenuse."

a) Give an algebraic expression for each answer.

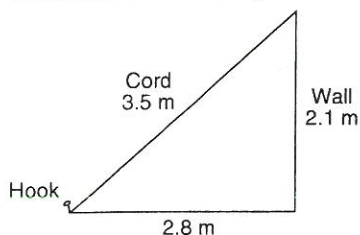
b) Who is right? Explain.

4. In chess, the knight moves by forming Ls from two horizontal squares and three vertical squares, or from three horizontal squares and two vertical squares. Each square has side 3 cm. The knight is always placed at the centre of a square. After one move, what distance separates the knight's initial and final positions?

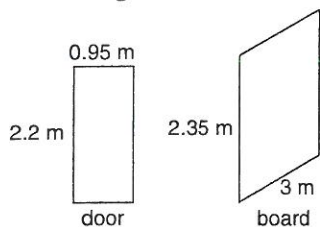


5. Mark's kite is caught in the top of a tree. He is 15 m from the tree, and the length of the unwound kite string is 16.55 m. How tall is the tree?

6. Gary is building a shed. He wants to verify that one wall and the floor are at right angles. The only tool available to him is a 3.5 m cord, which he attaches to the top of the wall and ties to a hook screwed into the floor, 2.8 m from the wall. He knows that the wall is 2.1 m high. Use this information to verify whether the wall forms a right angle with the floor.



7. Two construction workers need to carry a 2.35 m by 3 m plywood sheet through a door that is 2.2 m high and 0.95 m wide. Can they do so without having to cut the sheet?



8. Find an irrational number between 4 and 5 on a number line.

9. Show $\sqrt{8}$ on a number line.