

**Basic Skills Practice****The "Pythagorean" Right-Triangle Theorem, Part 2****Read each question and circle the best answer.**

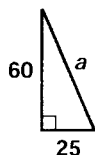
1. A right triangle has legs that measure 10 cm and 24 cm. Using the "Pythagorean" Right-Triangle Theorem, which equation would give the length of the hypotenuse?
- A $100 + 576 = c^2$
 B $a^2 + 100 = 576$
 C $10 + 24 = c^2$
 D $576 + b^2 = 100$
2. A piece of wood that is shaped like a right triangle is used to prop open a heavy door to the school gym. If the lengths of the shortest sides are 5 inches and 12 inches, what is the length of the longest side?
- F 16 in.
 G 15 in.
 H 14 in.
 I 13 in.
3. The ladder to a playground slide and the slide itself form a right triangle with the ground. If the ladder is 9 feet high and the distance from the foot of the ladder to the end of the slide is 12 feet, what is the length of the slide?
- A 15 ft
 B 16 ft
 C 17 ft
 D 18 ft
4. Given a right triangle with sides a and b and a hypotenuse of 25 inches, which of the following equations is correct?
- F $a^2 + b^2 = 25$
 G $a^2 + 25 = c^2$
 H $25 + b^2 = a^2$
 I $a^2 + b^2 = 25^2$

Consider the lengths of the sides of each triangle. Write yes if the sides form a right triangle, and write no if they don't.

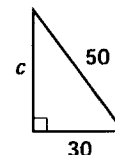
5. $a = 7, b = 24,$ and $c = 25$ _____
6. $a = 3, b = 4,$ and $c = 6$ _____
7. $a = 9, b = 16,$ and $c = 31$ _____
8. $a = 5, b = 8,$ and $c = 14$ _____

Find the missing length.

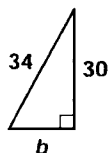
9. $a =$ _____



10. $c =$ _____



11. $b =$ _____



12. $d =$ _____

