

# 3 Practice Test

For #1 to #5, circle the best answer.

1. Which number is a perfect square?

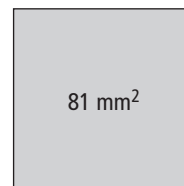
- A 10  
C 50

- B 20  
D 100

2. What is the side length of the square?

- A 6 mm  
C 12 mm

- B 9 mm  
D 18 mm



3. A square has a side length of 7 cm.  
What is the area of the square?

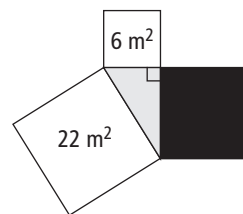
- A  $14 \text{ cm}^2$   
C  $28 \text{ cm}^2$

- B  $21 \text{ cm}^2$   
D  $49 \text{ cm}^2$

4. A right triangle has squares on each of its sides.  
What is the area of the black square?

- A  $4 \text{ m}^2$   
C  $16 \text{ m}^2$

- B  $14 \text{ m}^2$   
D  $28 \text{ m}^2$



5. The value of  $\sqrt{51}$  is closest to which whole number?

- A 7  
C 49

- B 8  
D 51



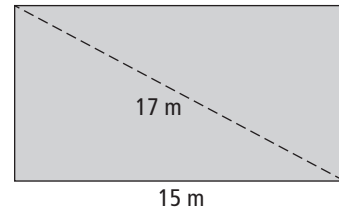
Complete the statement.

6. For a right triangle with sides  $a$ ,  $b$ , and  $c$ , the Pythagorean relationship is  $c^2 = a^2 + b^2$ .

The variable that represents the length of the hypotenuse is \_\_\_\_\_.

**Short Answer**

7. The length of the rectangular pool at Wild Water World measures 15 m and a diagonal measures 17 m. What is the width of the pool?



8. a) Name a whole number that has a square root between 7 and 8. \_\_\_\_\_

- b) List all of the whole numbers that have a square root between 7 and 8.

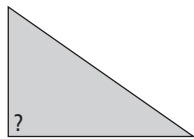
$7^2 =$  \_\_\_\_\_       $8^2 =$  \_\_\_\_\_

List the numbers between  $7^2$  and  $8^2$ .

\_\_\_\_\_

9. A triangle has sides that are 6 mm and 8 mm, and a hypotenuse that is 10 mm.

- a) Label the diagram with the dimensions.



- b) Use the Pythagorean relationship to determine whether this is a right triangle. Show your work.

The sum of the areas of the 2 smaller squares = the area of the large square

Sentence: \_\_\_\_\_

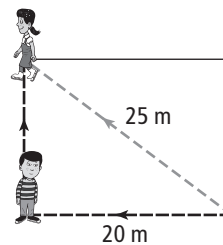
Name: \_\_\_\_\_

Date: \_\_\_\_\_

10. Josie and Han are skating on a rectangular skating rink.

- a) Josie skated diagonally across the rink.  
How far did she skate?

\_\_\_\_\_



- b) Han skated along the 2 sides of the rink to the opposite corner.  
How far did he skate?

$c =$  \_\_\_\_\_,  $a = ?$ ,  $b =$  \_\_\_\_\_

$c^2 = a^2 + b^2$

Distance Han skated

$=$  \_\_\_\_\_  $+$  \_\_\_\_\_

$=$  \_\_\_\_\_

Sentence: \_\_\_\_\_

- c) Who skated farther? Circle JOSIE or HAN.  
By how much?

Sentence: \_\_\_\_\_