

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

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

Math 8: Section 1.5 Problems for Squares and Square roots:

The value of  $10^2 + 10 + 1$  is

- (A) 101      (B) 1035      (C) 1011      (D) 111      (E) 31

The value of  $9^2 - \sqrt{9}$  is

- (A) 0      (B) 6      (C) 15      (D) 72      (E) 78

The value of  $(2^3)^2 - 4^3$  is

- (A) 0      (B) -8      (C) 4      (D) 10      (E) 12

The value of the expression  $5^2 - 4^2 + 3^2$  is

- (A) 20      (B) 18      (C) 21      (D) 10      (E) 16

The value of  $\sqrt{9 + 16}$  is

- (A) 5.2      (B) 7      (C) 5.7      (D) 25      (E) 5

How many even whole numbers lie between  $3^2$  and  $3^3$ ?

- (A) 9      (B) 4      (C) 6      (D) 10      (E) 17

A square has a perimeter of 28 cm. The area of the square, in  $\text{cm}^2$ , is

- (A) 196      (B) 784      (C) 64      (D) 49      (E) 56

Two squares, each with an area of  $25 \text{ cm}^2$ , are placed side by side to form a rectangle. What is the perimeter of this rectangle?

- (A) 30 cm      (B) 25 cm      (C) 50 cm      (D) 20 cm      (E) 15 cm

The perimeter of a square is 36 cm. The area of the square, in  $\text{cm}^2$ , is

- (A) 24      (B) 81      (C) 36      (D) 1296      (E) 324

A cube has a volume of  $125 \text{ cm}^3$ . What is the area of one face of the cube?

- (A)  $20 \text{ cm}^2$       (B)  $25 \text{ cm}^2$       (C)  $41\frac{2}{3} \text{ cm}^2$       (D)  $5 \text{ cm}^2$       (E)  $75 \text{ cm}^2$

In the following equations, the letters  $a$ ,  $b$  and  $c$  represent different numbers.

$$1^3 = 1$$

$$a^3 = 1 + 7$$

$$3^3 = 1 + 7 + b$$

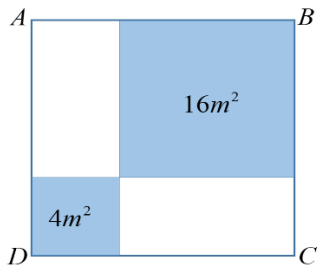
$$4^3 = 1 + 7 + c$$

The numerical value of  $a + b + c$  is

- (A) 58      (B) 110      (C) 75      (D) 77      (E) 79

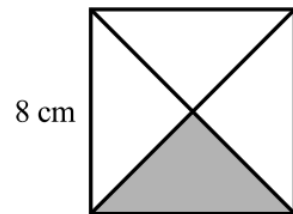
$ABCD$  is a square that is made up of two identical rectangles and two squares of area  $4 \text{ cm}^2$  and  $16 \text{ cm}^2$ . What is the area, in  $\text{cm}^2$ , of the square  $ABCD$ ?

- (A) 64      (B) 49      (C) 25      (D) 36      (E) 20



The diagonals have been drawn in the square shown. The area of the shaded region of the square is

- (A)  $4 \text{ cm}^2$       (B)  $8 \text{ cm}^2$       (C)  $16 \text{ cm}^2$   
 (D)  $56 \text{ cm}^2$       (E)  $64 \text{ cm}^2$



Two squares, each with side length  $5 \text{ cm}$ , overlap as shown. The shape of their overlap is a square, which has an area of  $4 \text{ cm}^2$ . What is the perimeter, in centimetres, of the shaded figure?

- (A) 24      (B) 32      (C) 40  
 (D) 42      (E) 50

