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 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 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.

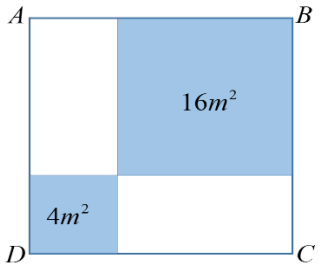
$$1^3 = 1$$
$$a^3 = 1 + 7$$
$$3^3 = 1 + 7 + b$$
$$4^3 = 1 + 7 + c$$

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

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

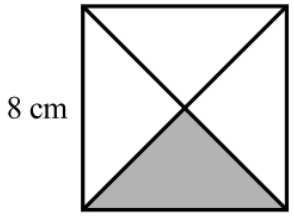
$ABCD$ is a square that is made up of two identical rectangles and two squares of area $4\ \text{cm}^2$ and $16\ \text{cm}^2$. What is the area, in cm^2, of the square $ABCD$?

(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 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