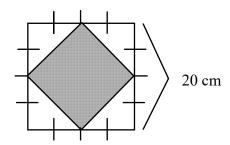
## Geometry Practice G.MG.A.3: Area 2 www.jmap.org

- 1. The perimeter of a square is 64 meters. Find the area of the square.
- 2. Use the figure below. What is the area of the shaded square?



- [A] 100 cm<sup>2</sup>
- [B] 200 cm<sup>2</sup>
- [C] 50 cm<sup>2</sup>
- [D] 400 cm<sup>2</sup>
- 3. A frame shop wants to cut a square hole in a mat 16 in. by 7 in. If each side of the hole is x in., which equation represents the remaining area?

[A] 
$$a = -x^2 + 46$$
 [B]  $a = -x^2 + 112$ 

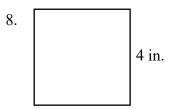
[B] 
$$a = -x^2 + 112$$

[C] 
$$a = x^2 + 112$$
 [D]  $a = x^2 + 16$ 

[D] 
$$a = x^2 + 16$$

4. The formula for the area of a square is  $A = s^2$ . Write an expression for the area of a square in which  $s = 4x^4$ .

- 5. The area of a square is 200 cm<sup>2</sup>. How long is the diagonal?
  - [A] 141.4 cm
- [B] 20 cm
- [C] 28.2 cm
- [D] 14.1 cm
- [E] none of the above
- 6. A solar energy collector needs several 3 in. by 3 in. square panels to cover an area 14 ft by 6 ft. How many of the square panels are needed?
  - [A] 112
- [B] 1344
- [C] 756
- [D] 4032
- 7. The sides of a square are each decreased by 2 inches. The area of the new square is 25 square inches. Find the length of a side of the original square.



4 in.

Use the figure above. How does the figure's area change when the length is increased by one inch and the width is decreased by one inch?

- [A] no change
- [B] increases
- [C] cannot tell
- [D] decreases

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9. The base of the Great Pyramid in Egypt is a square whose sides measure about 752 ft. Estimate the area in acres of the base of the Great Pyramid to the nearest hundredth. (Hint:  $1 \text{ acre} = 43,560 \text{ ft}^2$ .)

[A] 12.90 acres

[B] 12.8 acres

[C] 12.98 acres

[D] 13.00 acres

- 10. Brigid hired a tile setter to tile her bathroom floor. The tile setter charged Brigid \$1.50 per tile to install the tiles. Each tile is four inches square, and Brigid's bathroom floor has an area of 75 square feet. If the total bill is \$1000, was Brigid overcharged?
- 11. Compare the quantities in Column A and Column B.

Column A Column B

the length of a side of a square the length of the base of a triangle with area 8 cm<sup>2</sup> whose base and

height are equal lengths

- [A] The quantity in Column A is greater.
- [B] The quantity in Column B is greater.

- [C] The quantities are equal.
- [D] The relationship cannot be determined from the information given.

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[1]	256 m <sup>2</sup>
[2]	<u>B</u>
[3]	<u>B</u>
[4]	$16x^8$
[5]	<u>B</u>
[6]	<u>B</u>
[7]	7 inches
[8]	<u>D</u>
[9]	<u>C</u>
[10]	No. There are 9 tile per square foot; $9 \cdot 75 \cdot 1.50 = \$1012.50$ .
[11]	<u>B</u>