

Math 6 - 6.5 [Exam ID:3474]

- 1 **Based on the geometric pattern shown, what is the value of 8^5 ?**

$$8^1 = 8$$

$$8^2 = 64$$

$$8^3 = 512$$

$$8^4 = 4,096$$

- A 32,768
B 20,480
C 13
D 40
- 2 **Gracie's pattern of increasing perfect squares is shown below.**

25, 36, __, 64, 81, 100

What number does Gracie need to square to find the missing term?

- F 7
G 5
H 6
J 8

3 Which of the following is equivalent to $6 \times 6 \times 6 \times 6 \times 6$?

A 30^6

B 6^5

C 5^6

D 36^6

4 Based on the pattern shown, what is the value of 6^6 ?

$$6^1 = 6$$

$$6^2 = 36$$

$$6^3 = 216$$

$$6^4 = 1,296$$

F 46,656

G 2,592

H 36,000

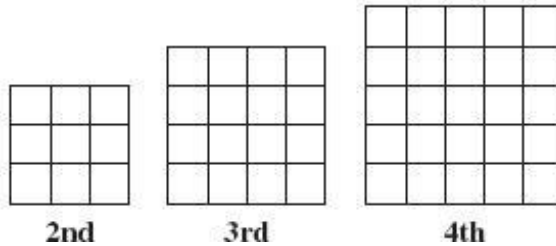
J 1,308

- 5 **Patty made a figure by drawing 4 small squares as shown below.**



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Patty then increased the size of the figure by adding 1 row and 1 column of small squares to get the next figure in the pattern. The next three figures in the pattern are shown below.



If Patty continues the pattern using the same rule, how many small squares will make up the 7th figure?

- A 25
 - B 49
 - C 64
 - D 34
- 6 **Which is a perfect square between 81 and 121?**
- F 99
 - G 86
 - H 114
 - J 100

- 7 **Tammy wrote the following values for powers of 10.**

$$10^2 = 100$$

$$10^3 = 1,000$$

$$10^4 = 10,000$$

$$10^5 = 100,000$$

Based on the pattern, which is equivalent to 100,000,000 ?

- A 10^8
B 10^6
C 10^7
D 10^9
- 8 **Which of the following is equivalent to 2^3 ?**

F $2 \cdot 2 \cdot 2$

G $2 \cdot 2 \cdot 2 \cdot 2$

H $2 \cdot 3$

J $3 \cdot 3$

- 9 **Which of the following numbers is *not* a perfect square?**

A 121

B 90

C 49

D 144

