Name: _____ Date: _____

Chapter 3 Practice Test

For #1 to #6, choose the best answer.

1. In 4^3, what does 3 represent?

   A base   **B** power
   C exponent   **D** coefficient

2. What is the coefficient in -3^5?

   A -3 **B** -1
   C 1   **D** 3

3. What expression can be written as $(3^2)^4$?

   A $(3 \times 3)(3 \times 3 \times 3 \times 3)$ **B** $(3 \times 3 \times 3 \times 3 \times 3 \times 3)$
   C $(3 \times 3)\,(3 \times 3)\,(3 \times 3)\,(3 \times 3)$ **D** $(3 \times 3 \times 3 \times 3)\,(3 \times 3 \times 3 \times 3)\,(3 \times 3 \times 3 \times 3)\,(3 \times 3 \times 3 \times 3)$

4. What expression is equivalent to $(5 \times 4)^2$?

   A 10×8 **B** 5×4^2
   C $5^2 \times 4$ **D** $5^2 \times 4^2$

5. What is $\dfrac{(-7)^3 \times (-7)^5}{(-7)^2}$ expressed as a single power?

   A $(-7)^6$ **B** $(-7)^{10}$
   C $(-7)^{13}$ **D** $(-7)^{17}$

6. Evaluate $(7 - 2)^2 + 25 \div (-2)^0$.

   A 36   **B** 50
   C -12.5 **D** -50

Fill in the blanks.

7. The base in $(3^2)^4$ is _____.

8. $5^3 \times 5^4$ written as a single power is _____.
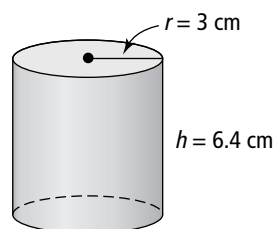
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Short Answer

9. Write in repeated multiplication form. Then, evaluate.

$$\frac{4^4 \times 4}{4^2}$$

10. Find the volume of the cylinder.
Round your answer to the nearest tenth of a cubic centimetre.

$r = 3$ cm

$h = 6.4$ cm

$V = \pi \times r^2 \times h$

Sentence: _____

11. Write the calculator sequence to evaluate each expression.

a) $(1 - 3)^4 \div 4$　　　　　　　　　　　**b)** $(-2)^0 + 4 \times 17^0$

12. **a)** Circle Nabil's mistake.

$32 \div (-2)^3 + 4^2$
$= 32 \div (-8) + 8$　　　　　*Step 1*
$= -4 + 8$　　　　　　　　　*Step 2*
$= 4$　　　　　　　　　　　*Step 3*

b) Find the correct answer.