Name _____ Date _____ Period _____

Lesson 6-4 · Apply Day

Reinforce Understanding

Order of Operations with Powers

I can write numerical expressions from a real situation and evaluate them using the order of operations, including powers.

Worked model

Find the value of 4 + 3 × (9 − 7)^2.

1. Grouping first. (9 − 7) = 2, so now 4 + 3 × 2^2
2. Powers next. 2^2 = 4, so now 4 + 3 × 4
3. Multiply and divide, left to right. 3 × 4 = 12, so now 4 + 12
4. Add and subtract, left to right. 4 + 12 = 16

Answer: The value of the expression is 16.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Evaluate 2x + 4 when x = 3.

Complete each step, then write the final answer.

1. Substitute 3 for x: 2(3) + 4. First multiply: ___.
2. Add 4: ___.

Answer: _____

2. Evaluate 3x + 6 when x = 4.

Complete each step, then write the final answer.

1. Substitute 4 for x: 3(4) + 6. First multiply: ___.
2. Add 6: ___.

Answer: _____

3. Evaluate 4x + 8 when x = 5.

Complete each step, then write the final answer.

1. Substitute 5 for x: 4(5) + 8. First multiply: ___.
2. Add 8: ___.

Answer: _____