

# 6<sup>th</sup> Grade – Study Guide

## 6.6c Order of Operations

### Skill #1 – Order of Operations Steps

1. In order of operations, tell what the abbreviation GEMDAS stands for:

G - \_\_\_\_\_  
 E - \_\_\_\_\_  
 MD - \_\_\_\_\_ and \_\_\_\_\_  
 AS - \_\_\_\_\_ and \_\_\_\_\_

2. When simplifying the following, which operation should be performed first?

$$5 \div 1 \cdot 7 + 3 \cdot 4$$

- A  $1 \cdot 7$
- B  $7 + 3$
- C  $3 \cdot 4$
- D  $5 \div 1$

3. When simplifying the following, which operation should be performed first?

$$6 + 7 - 9 + 3 - 1$$

- A  $7 - 9$
- B  $6 + 7$
- C  $3 - 1$
- D  $9 + 3$

4. When simplifying the following, which operation should be performed first?

$$5 + 2^2 - 5 \cdot 1$$

- A  $5 \cdot 1$
- B  $5 + 2$
- C  $2^2$
- D  $2^2 - 5$

5. When simplifying the following, which operation should be performed first?

$$7(2 + 6 \cdot 5) - 9$$

- A  $7(2)$
- B  $6 \cdot 5$
- C  $2 + 6$
- D  $5 - 9$

### Skill #2 – Solving Order of Operations with Whole Numbers

6. What is the value of?

$$11^2 - 7 \cdot 5$$

7. What is the value of?

$$1 + 8 \cdot 4 - 7$$

8. What number is equal to

$$6(2^3 + 1)$$

8. What number is equal to

$$(4^2)(8 - 6)$$

9. Which expression has the same value as  $30 \div (20 \div 2)$

- A  $30 \div 5$                       B  $30 \div 10$                       C  $(20 \div 10) \div 2$                       D  $3 \div 3$

Skill #3 – Solving Order of Operations with Integers

10. An expression is show. What is the value of the expression?

$$-1 - 14 \div 7 + 8$$

11. An expression is show. What is the value of the expression?

$$-1 + 8 \times 8 \div 4$$

12. Solve:

$$|-3 + (4 \div -2)|$$

13. Solve:

$$|5(-8 + 5)|$$

14. Identify each expression that is equivalent to -3. (Circle all correct answers)

$1 + (-5) \cdot 2 + 7$	$(-17 + 5) \div 4$	$(-9) \div 3$
$-6 - 3$	$-7 - (-4)$	$-11 - (-5) + (-7) \cdot (-1)$
$-4 + 5 \cdot (-3) \div -15$	$-1 - (-19) \div 3$	$-14 + -11$