

Guided Notes: Order of Operations

Name: Key A: _____

| Which comes first? | Example 1 | Example 2 |
|--|--|--|
| <p>1. Multiply and Divide Left to right (read it like a book)</p> <hr/> <p>2. Subtract and Add Left to right (read it like a book)</p> <hr/> <p>Note: $3(4) = 3 \times 4 = 12$</p> | <p>Multiply is first, so we multiply first.</p> <hr/> $4 \times 9 \div 2$ $\quad \vee$ $36 \div 2$ $\quad \vee$ 18 | <p>Divide is first, so we divide first.</p> <hr/> $18 \div 3 \times 4$ $\quad \vee$ 6×4 $\quad \vee$ 24 |

SUMMARY

Multiply/divide is **ALWAYS** before add/subtract
 Multiply **IS NOT ALWAYS** before Divide. ORDER MATTERS.
 Subtract **IS NOT ALWAYS** before Add. ORDER MATTERS.

You Try!

| | |
|--|--|
| $36 \div 6 \times 5$ $\quad \vee \quad \downarrow$ 6×5 30 | $8 \times 5 \div 4$ $\quad \vee \quad \downarrow$ $40 \div 4$ 10 |
| $7 + 5 - 3$ $\quad \vee \quad \downarrow$ $12 - 3$ 9 | $18 - 8 + 2$ $\quad \vee \quad \downarrow$ $10 + 2$ 12 |
| $16 \div 4 + 7 \cdot 3$ $\quad \vee \quad \downarrow \quad \downarrow$ $4 + 7 \cdot 3$ $\quad \downarrow \quad \vee$ $4 + 21$ 25 | $14 + 2(6) - 3$ $\quad \downarrow \quad \downarrow$ $14 + 12 - 3$ $\quad \vee$ $26 - 3$ 23 |

$$5 \cdot 5 \leftarrow 5^2 - 7 + 8$$

$$\downarrow \quad \downarrow$$

$$25 - 7 + 8$$

$$\downarrow$$

$$18 + 8$$

$$26$$

$$15 + 4 \cdot 3 \div 6$$

$$\downarrow \quad \downarrow \quad \downarrow$$

$$15 + 12 \div 6$$

$$\downarrow \quad \downarrow$$

$$15 + 2$$

$$17$$

$$3(14 \div 7 \cdot 5)$$

$$\downarrow \quad \downarrow \quad \downarrow$$

$$3(2 \cdot 5)$$

$$\downarrow$$

$$3(10)$$

$$30$$

$$8 \cdot 8 \leftarrow 8^2 - 3 \cdot 8 \div 6 + 4$$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

$$64 - 3 \cdot 8 \div 6 + 4$$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

$$64 - 24 \div 6 + 4$$

$$\downarrow \quad \downarrow \quad \downarrow$$

$$64 - 4 + 4$$

$$\downarrow \quad \downarrow$$

$$60 + 4$$

$$64$$

$$3 \cdot 3 \leftarrow (3^2 - 6) + 15 \div 3$$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

$$(9 - 6) + 15 \div 3$$

$$\downarrow \quad \downarrow \quad \downarrow$$

$$3 + 15 \div 3$$

$$\downarrow$$

$$3 + 5$$

$$8$$

$$5 + 2(1 + 6^2 - 7) \quad 6 \cdot 6$$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

$$5 + 2(1 + 36 - 7)$$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

$$5 + 2(30)$$

$$\downarrow \quad \downarrow$$

$$5 + 60$$

$$65$$

$$18 - 5(8 \div 4 \times 3)$$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

$$18 - 5(2 \times 3)$$

$$\downarrow \quad \downarrow \quad \downarrow$$

$$18 - 5(6)$$

$$\downarrow$$

$$18 - 30$$

$$-12$$

$$9 + (15 - 8 + 3)^2 \div 2$$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

$$9 + (7 + 3)^2 \div 2$$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

$$9 + 10^2 \div 2$$

$$\downarrow \quad \downarrow$$

$$9 + 100 \div 2$$

$$\downarrow \quad \downarrow$$

$$9 + 50$$

$$59$$