

# Algebra Foundations

## HW 1 Order of Operations with Integers

Name: Solutions

Date: \_\_\_\_\_ Per. \_\_\_\_\_

Simplify each expression. Notice that the parentheses change the value!

$$1.) \quad 7 - 5 \cdot 8 + 6 \div 2 = \underline{-30}$$

$$7 - 40 + 3$$

$$-33 + 3$$

$$(7 - 5) \cdot (8 + 6) \div 2 = \underline{14}$$

$$2 \cdot 14 \div 2$$

$$28 \div 2$$

$$(7 - 5) \cdot 8 + (6 \div 2) = \underline{19}$$

$$2 \cdot 8 + 3$$

$$16 + 3$$

$$2.) \quad 4 + 9 - 6 \div 2 \cdot 5 + 1 = \underline{-1}$$

$$4 + 9 - 3 \cdot 5 + 1$$

$$4 + 9 - 15 + 1$$

$$13 - 15 + 1 = -2 + 1 = -1$$

$$4 + 9 - (6 \div 2) \cdot (5 + 1) = \underline{-5}$$

$$4 + 9 - 3 \cdot 6$$

$$4 + 9 - 18$$

$$13 - 18$$

$$(4 + 9 - 6 \div 2) \cdot 5 + 1 = \underline{51}$$

$$(4 + 9 - 3) \cdot 5 + 1$$

$$(13 - 3) \cdot 5 + 1$$

$$10 \cdot 5 + 1$$

Fix these equations! None of the statements below is correct as written. Rewrite them, inserting parentheses so that the resulting statements are correct equations. Some are challenging!!!

$$3.) \quad (2 + 3) \cdot 4 = 20$$

$$5 \cdot 4 = 20$$

$$7.) \quad 8 - (15 + 6) \div 3 = 1$$

$$8 - 21 \div 3 =$$

$$8 - 7 = 1$$

$$4.) \quad 3 + 4 \cdot (6 - 8) = -5$$

$$3 + 4(-2) = -5$$

$$3 + (-8) = -5$$

$$8.) \quad (7 + 3)^2 = 100$$

$$10^2 = 100$$

$$5.) \quad 5 \cdot 2 - 4 \div (6 - 4) = 8$$

$$10 - 4 \div 2$$

$$10 - 2 = 8$$

$$9.) \quad (24 + 16) \div (8 - 4) = 10$$

$$40 \div 4 = 10$$

$$6.) \quad (12 - 8) \cdot (1 + 7) = 32$$

$$4 \cdot 8 = 32$$

$$10.) \quad 20 \div (7 - 2) + 5^2 \cdot 3 = 79$$

$$20 \div 5 + 25 \cdot 3$$

$$4 + 75 = 79$$