# 1.5

# DIVIDING INTEGERS

# DO NOW

**Tell whether the statement is true or false. Explain your reasoning.**

**The product of three positive integers is positive.**

**The product of three negative integers is positive.**

# The many forms to divide to get a quotient

**Quotient**- _____

Multiplication problems can be written:

$8 \div 2$

$8 / 2$

$\frac{8}{2}$

$2\overline{)8}$

# RULES FOR DIVIDING INTEGERS

**Divide numbers like regular division… however…**

**POSITIVE ÷ POSITIVE = POSITIVE**
**POSITIVE ÷ NEGATIVE = NEGATIVE**
**NEGATIVE ÷ POSITIVE = NEGATIVE**
**NEGATIVE ÷ NEGATIVE = POSITIVE**

1) $8 \div -4$

2) $-20 \div 4$

3) $-21 \div -7$

4) $-36 \div 3$

5) $-30 \div -5$

6) $48 \div -4$

7) $-15 \div -1$

8) $\frac{-72}{9}$

9) $\frac{-56}{-8}$

# Review – Order of Operations

**P**

**E**

**M**

**D**

**A**

**S**

# Practice

**Simplify the following**

10) $9+6\times4-7$

11) $24\div(3\bullet5-7)$

# P E M D A S

Left → Right  Left → Right

12) $(4-2)^3-5$

13) $8+2\times9^2$

# P E M D A S

Left → Right  Left → Right

14) $6 + 2^3 \div 8$

15) $100 - 5^2 \times 4$

# Important!!

$$(-4)^2 \quad vs \quad -4^2$$

**Evaluation each expression**

16) $-2^4$

17) $(-2)^4$

# Evaluating with negative numbers

**Evaluate** $x^3$ **if** $x = -2$

**Evaluate** the expression if $x = 8$ and $y = -4$

**18)** $10 - x^2 \div y =$

# Practice

**Evaluate** the expression if $a = -18$ and $b = -6$

19) $a \div b =$

20) $\dfrac{a+6}{3} =$

21) $\dfrac{b^2}{a} + 4 =$

# Mean

- (Average) – _____

Mean = _____

**1) Find the average of the following numbers:**

**3, -3, -5, 2, -7**