# Study Guide

# Chapter 2 Test (P1)

## 2.1: Use Integers and Rational Numbers

**- Be able to classify numbers as whole, integer, rational and irrational using all names that apply**

**Ex:** $-7$ **Ex:** $\sqrt{49}$ **Ex:** $\frac{1}{2}$

- **Be able to order numbers from least to greatest**

**Ex:** $-\frac{1}{5}, 6, -1, \sqrt{9}$

- **Be able to find absolute value and opposites of numbers**

**Ex:** Evaluate: $-x + |x|$ if $x = -2$

## 2.2: Add Real Numbers:

**- Be able to add numbers with same signs and different signs**

**Ex:** $-5 + (-7)$ **Ex:** $-2 + (-14)$ **Ex:** $4 + (-12)$ **Ex:** $-5 + 20$

**Ex:** $-1 + (-5) + (-x)$ when $x = 2$

**Ex:** $|x| + (-3) + 7 \quad x = -3$

## 2.3 Subtract Real Numbers:

- **Be able to rewrite subtraction as addition and follow addition rules**

**Ex:** $-11 - 21$

**Ex:** $-18 - (-9)$

**Ex:** $12 - (y - x)$

$x = 2 \quad y = -3$

## 2.4 Multiply/Divide Real Numbers

- **Be able to multiply and divide numbers with same signs and different signs**

**Ex:** $(-6)(-2)$

**Ex:** $3(-7)$

**Ex:** $-5(-6)(-2)$

**Ex:** $14 \div (-2)$

**Ex:** $-80 \div (-10)$

**Ex:** $-12 \div 3$

**Ex:** $13 \div \left(-4\frac{1}{3}\right)$

**Ex:** $\dfrac{4x}{3y + x}$ $x = 6$ and $y = -8$

## 2.5: Apply the Distributive Property

- **Be able to use the distributive property and identify and combine like terms:**

**Ex:** $2(x+7)$

**Ex:** $-8(p-3)$

**Ex:** $3(m+5)+-10$

**Ex:** $2(r+4)+6r$

**Ex:** $4x+7x$

**Ex:** $2x-5x$

**Ex:** $6+8y-8-12y$

## 2.7: Find Square Roots and Compare Real Numbers

- **Be able to evaluate square roots, estimate square roots and order square roots**

**Ex:** $\sqrt{121}$

**Ex:** Estimate $\sqrt{72}$ to the closest integer

**Ex:** $\pm\sqrt{25}$

**Ex:** $-\sqrt{36}$