# Chapter 2 and 11.2,11.4 Review

## 2.1 Use Integers and Rational Numbers

Whole, integer, rational, irrational  Ordering and comparing numbers  Absolute Value and Opposite of

## 2.2 Adding Positive and Negative Numbers

Think about being in debt and having money

## 2.3 Subtracting Positive and Negative Numbers

'Keep change opposite' or 'Add the opposite'

## 2.4 Multiplying Positive and Negative Numbers

Signs are the same=positive  Signs are different=negative

## 2.5 Distributive Property

Distribute and Combine Like Terms- Do not use double signs  Distributive property word problem

## 2.6 Dividing Positive and Negative Numbers

Signs are the same=positive  Signs are different=negative

## 2.7 Finding Square Roots

$x^2 = 25$ Remember $x = 5\ and\ x = -5$

Estimating square roots (between which two integers)

## 11.2 Radicals

Simplifying radicals

Adding, subtracting, multiplying, and dividing radical expressions

## 11.4 Pythagorean Theorem

Find the missing side length

Pythagorean Theorem word problems

## Evaluate Expressions

1) $-4\sqrt{x} - 2 \; when \; x = 49$

2) $\frac{2x-3}{x^2-2} \; when \; x = -4$

## Simplify

3) $\frac{-12x-8}{-2}$

4) $-\frac{4}{5}(x + 10)$

5) $2(x + 5) + 3(x - 2)$

6) $3(x - 4) - 2(x + 1)$

## Between which two integers?

7) $\sqrt{80}$

8) $-\sqrt{120}$

## Radicals:

A radical is simplified if……..

**1.** The number under the radical has no perfect square factors.

**2.** No variables have an exponent greater than 1.

**3.** There are no fractions under the radical sign.

**4.** There are no radicals in the denominator

## Write each answer in simplified radical form.

9) $\sqrt{50}$

10) $2\sqrt{3} \cdot 4\sqrt{6}$

11) $\sqrt{24x^2y}$

12) $\sqrt{\frac{49}{100}}$

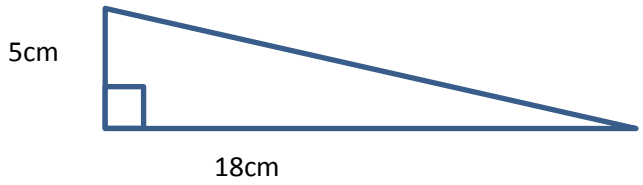
13) $\sqrt{18} + 5\sqrt{2}$

14) $\sqrt{\frac{81}{3}}$

15) $\sqrt{2}(3 - 5\sqrt{2})$

## Pythagorean Theorem

16) Find the missing side length



17) A painter is painting the outside of a house. He has a 12 foot ladder. He leans it against the house and finds that it reaches 8 feet high. How far is the base of the ladder from the house? Draw a picture to answer.

18) Is a triangle with side lengths 13 in, 15 in, and 10 in a right triangle?

## Distributive word problem

19) You decide to buy the candy for trick or treating. You buy 40 pieces of candy (you do not have many kids come). You buy m&m's and Gummy Bears. The m&m's cost $0.25 each and the Gummy Bears cost $0.50 each. Write a **simplified expression** for the total cost of the candy if you buy *m* m&m's.