

## Chapter 1 Review

### 1.1 Evaluate Expressions

Input values and simplify

Exponents  $-5^2$  vs  $(-5)^2$

### 1.2 Order of Operations

PEMDAS- Go left to right when MD or AS

Evaluate- Plug in and then simplify using PEMDAS

### 1.3 Writing Expressions

Translate a verbal phrase into an expression

Write an expression given a situation

Find unit rate

### 1.4 Write Equations and Inequalities

Translate a verbal phrase into an equation

Translate a verbal phrase into an inequality

Check if a value is a solution to an equation or inequality

### 1.6 Represent Functions as Rules and Tables

Identify domain and range of a function

Tell whether the pairing is a function

Make a table given a rule and domain

Write a rule given a table

### 1.7 Represent Functions as Graphs

Graph a function given a rule and domain

Create a table and write a rule given a graph

## 1.1 Evaluating Expressions

Simplify.

1)  $-6^2$

2)  $(-4)^2$

Input the value and simplify

3)  $x^2$  when  $x = -7$

4)  $-x^2$  when  $x = 8$

## 1.2 Order of Operations and Evaluating Expressions

Input the values and simplify using order of operations

5)  $11(6 - x)^2 - 10$  when  $x = 3$

6)  $\frac{(x+5)-2}{2(8-y)^3}$  when  $x = 3$  and  $y = 6$

## 1.3 Writing Expressions

Translate the verbal phrase into an expression

7) 7 less than a number

8) The quotient of a number and 3

9) 5 times the sum of 9 and  $x$

10) 7 more than the product of 8 and a number

11) The difference of 4 and a number

Write an expression for the situation

12) The number of months in  $y$  years

13) The amount of  $m$  money you get if 4 people share it.

14) The number of games you can play if you have  $d$  dollars if each game costs \$0.75

Find the unit rate

15) \$36.75 for 5 books

16) 445 yards in 4 games.

17) You are buying supplies for school. You want to get a calculator for \$8 and some pencils. There is a sale and you receive three free pencils when you purchase a calculator. You notice that 6 extra pencils will cost \$3.90. Write an expression for the total cost if you buy a calculator and  $(p)$  extra pencils.

## 1.4 Writing Equations and Inequalities

Write an equation or inequality for each phrase below.

18) The sum of a number and 8 is at most 12.

19) The product of 2 and  $w$  is 12.

20) 3 times the sum of 7 and a number is no less than 15.

Check whether the given number is a solution of the equation or inequality.

21)  $3x + 7 > 20$  for  $x = 4$

22)  $2p - 1 \leq 7$  for  $p = 3$

## Chapter 2

### 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)

## Evaluate Expressions

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

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

3)  $\sqrt{.0025}$

4)  $\sqrt{1,690,000}$

## Simplify

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

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

7)  $2(x + 5) + 3(x - 2)$

8)  $3(x - 4) - 2(x + 1)$

## Solve

9)  $x^2 = 36$

Between which two integers?

10)  $\sqrt{80}$

11)  $-\sqrt{120}$

## Distributive word problems

12) 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.

13) You are buying balloons for the school dance. You need a total of 56 balloons. The latex balloons cost \$.50 each and the mylar balloons cost \$2 each. Write a simplified expression to represent the cost ( $c$ ) if you buy ( $b$ ) latex balloons.