Chapter 1 Review

1.1 Evaluate Expressions

 Input values and simplify

 Exponents $-5^{2}$ vs $\left(-5\right)^{2}$

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) $\left(-4\right)^{2}$

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) $11\left(6-x\right)^{2}-10 when x=3$ 6) $\frac{\left(x+5\right)-2}{2\left(8-y\right)^{3}} when x=3 and y=6$

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) $\sqrt{1,360,000}$

Simplify

5) $\frac{-12x-8}{-2}$ 6) $-\frac{4}{5}\left(x+10\right)$

7) $2\left(x+5\right)+3\left(x-2\right)$ 8) $3\left(x-4\right)-2\left(x+1\right)$

**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 ballons cost $2 each. Write a simplified expression to represent the cost (c) if you buy (*b*) latex balloons.