Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_

Review Practice 2

1. **Define the terms listed in the table and give one example for each definition**

|  |  |  |  |
| --- | --- | --- | --- |
| Real Numbers | Irrational Numbers | Rational Numbers | Integers |
| Whole Numbers | Natural Numbers | Radical  | Radicand |
| Square Roots | Perfect Squares | Cube Roots | Terminating Decimals |
| Repeating Decimals | Similar Triangles | Coefficient | Infinitely Many Solutions |
| Laws of exponents | Power | Perfect Squares | Perfect cubes |
| Transversal | Parallel Lines | Scientific Notation | Standard Form of a Number |
| Distributive Property | Like terms | Intersecting | Parallel Lines |
| Congruent

|  |
| --- |
| ≅  |

 | A’ is read as A prime | Similarity | Same side Exterior angles |
| Corresponding sides | Corresponding angles | Rigid Transformation | Alternate Exterior Angles |
| Same side Interior Angles | Alternate Interior Angles | Angle-Angle Criterion | Deductive Reasoning |
| Vertical Angles | Adjacent  | Supplementary | Complementary |
| Right Triangle | Hypotenuse | Legs | Pythagorean Theorem |
| Pythagorean Triple | Cone | Cylinder | Sphere |
| Radius | Volume | Height | Pi |

1. Sam estimates that  is about six. Do you agree or disagree? Explain.
2. Is 8.5 a good first guess for $\sqrt{72}$ ? Why or why not?
3. Which is a rational number and an integer but *not* a whole number?

 **A** - **B** -1.03 **C** –(72) **D** 

1. Which is an irrational number?

 **A –**7.171771777… **B**  **C**  **D** 

Which name does *not* apply to?

 **A** integer **B** irrational number **C** rational number**D** real number

1. What is the difference between 345.23 m and 654.52 m expressed in scientific notation?
2. Write in simplest form: a.  b. (m5)-3(m4n5)4 c. 
3. A grasshopper weighs 5.88 X 10-2 ounces. How many grasshoppers are in a pound? (a pound has 16 ounces)
4. A car rental company charges $39.99 fix fee plus $0.20 per mile. Jill rented a car for one day and the charges were $47.39, before tax. Use *m* for number of miles. Write an equation. Find how many miles Jill drove.
5. The sum of three consecutive even numbers is 102. Which are the three numbers?
6. The sum of two numbers is 181. Their difference is 11. What are the two numbers?
7. Solve the equations:

a. 3(-5g + 2) = -7g +8 + 6g

b. 

c. -6d + 7 – 4d = 2d – 5 + 3d

1. Bonnie is on her school’s Battle of the Books team. She still has 40 pages to read in her final book before the competition. If she reads 5 times the number of pages tonight as she read last night, and then the last 10 pages tomorrow night, she will be finished with her book. Write and solve an equation to determine how many pages Bonnie has to read tonight.
2. Explain when an equation has infinitely many solutions.
3. Explain when an equation has no solution.
4. The measure of one angle of a triangle is twice the measure of a second angle. The measure of the third angle is 12 less than the sum of the other two. Find the measure of the angles of the triangle.
5. What is the length of a diagonal of a rectangular picture whose sides are 12 inches by 17 inches? Round to nearest tenth.
6. What is the perimeter of a right triangle if the hypotenuse is 15 centimeters and one of the legs is 9 centimeters?
7. A ladder 17 feet long is leaning against a wall. The bottom of the ladder is 8 feet from the base of the wall. How far up the wall is the top of the ladder?
8. A wire 30 feet long is stretched from the top of a flagpole to the ground at a point 15 feet from the base of the pole. How high is the flagpole? Round to nearest tenth.
9. Find the volume of the figure:

23. State the inputs and outputs for the following ordered pairs.

{(-6, 5), (2, 5), (1, 20), (-6, -10)}

Inputs:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Outputs:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Explain why *x*2 + *y*2 = 225 is not a function.

1. Is a function? Explain your answer.
2. Write a rule for the following scenario: “Simon texts ten times per minute”
3. What kind of function y = 12x is? What is its rate of change?
4. Evaluate the function f ( x ) = 2x + 3 for the following domain D: { −5, −2, 0, 2, 3 }
5. Complete the table if the rule of the function is f(x) = - 3 x + 8

|  |  |
| --- | --- |
| x | y |
| –6 |  |
| –1 |  |
| 1 |  |
| 3 |  |
| 5 |  |

1. Which one of the two functions has the greatest rate of change?

|  |  |
| --- | --- |
| **x** | **y** |
| **-2** | **10** |
| **0** | **12** |
| **2** | **14** |

1. **y = 3x+1 II.**
2. Create a scenario that would be described by the following function: f(x) = 7.5 x + 12
3. Which are the graphs of a function?
4. Gary’s Pizzeria charges $9.95 for a large pizza plus $1.50 per topping. An order of chicken wings costs $5.50. Amy wants an order of chicken wings and a large pizza. How many toppings did she order if the total cost is $19.95 before taxes?
5. Mark plans to take a trip. He saves money every month to pay for the expenses. If by January he had saved $1120 and by April he had $1450, how much does he save every month? Using a table of values, predict in what month he will reach $2000.
6. Find the slopes of the lines passing through the given points:

a. (1, 2) and (2, 6) b. (-3, 3) and (-1,-4) c. (-4, -2) and (4, 1)

1. Give an example of a line which has

a. positive slope

b. negative slope

c. slope zero

d. undefined slope

1. Write an equation in slope intercept form for each of the following lines:
2. slope -1; y-intercept at (0, 5) b. Passing through P(-3,6) and R(3, -6)
3. What kind of trend is shown when:
4. one set of values increases as the other set decreases?
5. one set of values increases as the other set increases?
6. the points show no relationship?
7. Solve the following system using the three methods learned this year



1. ![[image]]()Graph the line:

 