**Unit 3 Math 7+ Review Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Review your notes before you complete each of the sections.**

**Part 1: Solving one-step equations.**

**7m = -49 48 + p = -72** $\frac{p}{4}$ **= -10**

**Part 2: Solving two-step equations.**

**-8 + 6f = -5** $\frac{h}{4}$ **+ 5 = -7** $\frac{e}{-9}$ **– 5 = -11**

-0.8m - 29.17 = -16.43 $\frac{2}{3}$x - $ \frac{1}{5} $ = -$ \frac{3}{5}$

**Part 3: Solving multi-step equations.**

**8b – 11 – b = 24 4(6c – 3.5) = 15** $\frac{2}{4} $**( 10y – 18) =**$ $**-12**

**Part 4: Solving equations with variables on both sides.**

**4g + 21 = 11g -9c – 16 = c + 34** $\frac{1}{3}$ **f + 21 =** $\frac{1}{2}$ **f + 18**

$-3\left(x+2\right)=4(x-5)$ $7x-9=-x+39$

**Part 5: Convert a repeating decimal to a fraction.**

$0.1\overbar{4}$ **2.56565656…… 0.013131313…..**

**Part 6: Simplifying with square and cube roots.**

$\sqrt{144}- 13$**=** $\sqrt[3]{-368+25}$ **=** $\frac{-\sqrt{49}}{\sqrt[3]{125}}$ **=**

**Part 7: Solving word problems**

**Directions: Solve the following word problems by identifying a variable and writing an equation.**

1. **2 times the sum of a number and 12 is equal to 42. What is the number?**

**Variable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Equation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Solution \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Jimmy has $17 more than Phil. Their friend Bob has $21 less than Phil. The total amount of money they have is $176. How much does each boy have?**

**Variable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Equation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Solution \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **3 consecutive integers have a sum of 57. What are the 3 integers?**

**Variable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Equation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Solution \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **During the football season, Jason scored 7 touchdowns. He scored 2 fewer touchdowns than three times the number Kevin did. How many touchdowns did Kevin score?**

**Variable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Equation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Solution \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **John leaves home driving at a speed of 40 mph. His brother Bill leaves home half an hour later. He drives at a steady rate of 50 mph. How long after John leaves home will Bill catch up?**

**Variable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Equation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Solution \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **The perimeter of a rectangle is 72. If the length is 4 less than 3 times the width, what is the length of the rectangle?**

**Variable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Equation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Solution \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Part 8: Simplifying and estimating Roots

Directions: Complete the table below.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Simplified form | Between what 2 integers does the value fall between? | Estimated to nearest tenth |
| $$\sqrt{48}$$ |  |  |  |
| $$\sqrt{36}$$ |  |  |  |
| $$\sqrt{15}$$ |  |  |  |

Part 9: Types of Numbers

Complete the table: Place a check in the box if the number can be classified as the given type of number.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Whole | Irrational | Rational | Integer | Natural |
| $$π$$ |  |  |  |  |  |
| $$ \sqrt{16}$$ |  |  |  |  |  |
| $$\sqrt[ 3]{64}$$ |  |  |  |  |  |
| $$\frac{2}{3}$$ |  |  |  |  |  |
| $$ \sqrt{8}$$ |  |  |  |  |  |
| **2**$\frac{1}{2}$ |  |  |  |  |  |
| $$\frac{-27}{3}$$ |  |  |  |  |  |

**Part 10: Solving Equations with Roots**

**Directions: Solve the following equations.**

 $\sqrt{x+4}$ = 8 $\sqrt[3]{c}- 4=2$ −31 = −4x2 + 5 x3 + 9 = −18