Name: _____   Period: _____   Date: _____

Math Unit 1: Numerical Expressions and Factors

Lesson 1.1- Whole Number Operations (Day 2)

SWBAT:	**Paraphrase:**

Essential Question: How do you know which operation to choose when solving a real-life problem?

Vocabulary	<u>Sum</u>-the answer to an _____ problem <u>Difference</u>-the answer to a _____ problem <u>Product</u>-the answer to a _____ problem <u>Quotient</u>-the answer to a _____ problem <u>Expression</u>- <u>Whole Number</u>-
Example 1	**You make 24 equal payments for a go-kart. You pay a total of $840. How much is each payment?** You want to find the number of groups of 24 in $840. The phrase *groups of 24 in $840* indicates you need to find the quotient of 840 and 24. Use long division to find **the quotient.** Decide where to write the first digit of the quotient. $\frac{?}{24\overline{)840}}$ Do not use the hundreds place because 24 is greater than 8. $\frac{?}{24\overline{)840}}$ Use the tens place because 24 is less than 84. So, divide the tens and write the first digit of the quotient in the tens place. $\begin{array}{r} 3 \\ 24\overline{)840} \\ -72 \\ \hline 12 \end{array}$ Divide 84 by 24: There are three groups of 24 in 84. Multiply 3 and 24. Subtract 72 from 84. Next, bring down the 0 and divide the ones. $\begin{array}{r} 35 \\ 24\overline{)840} \\ -72\downarrow \\ \hline 120 \\ -120 \\ \hline 0 \end{array}$ Divide 120 by 24: There are five groups of 24 in 120. Multiply 5 and 24. Subtract 120 from 120. The quotient of 840 and 24 is 35. So, each payment is $35. **Check** Find the product of the quotient and the divisor. $\begin{array}{r} 35 \quad \text{quotient} \\ \times 24 \quad \text{divisor} \\ \hline 140 \\ 70 \\ \hline 840 \quad \text{dividend} \checkmark \end{array}$
Your Turn	You make 18 equal payments for a video game system with games. You pay a total of $468. How much is each payment?

Example 2	**A 301-foot-high swing at an amusement park can take 64 people on each ride. A total of 8983 people ride the swing today. All the rides are full except for the last ride. How many rides are given? How many people are on the last ride?**

To find the number of rides given, you need to find the number of groups of 64 people in 8983 people. The phrase *groups of 64 people in 8983 people* indicates you need to find the quotient of 8983 and 64.

Divide the place-value positions from left to right.

$$\begin{array}{r} 140\ R23 \\ 64\overline{)8983} \\ -\ 64\downarrow \\ \hline 258 \\ -\ 256\downarrow \\ \hline 23 \\ -\ 0 \\ \hline 23 \end{array}$$

There is one group of 64 in 89.

There are four groups of 64 in 258.

Do not stop here. You must write a 0 in the ones place of the quotient.

There are no groups of 64 in 23.

The remainder is 23.

The quotient is $140\frac{23}{64}$. This indicates 140 groups of 64, with 23 remaining.

∴ So, 141 rides are given, with 23 people on the last ride. |
| Your Turn | A record-breaking rollercoaster at an amusement park can take 28 people on each ride. A total of 24, 539 people ride the rollercoaster today. All of the rides are full except the last ride. How many rides are given? How many people are on the last ride? |
| Notes / Questions | |

Let's Practice!

Find the value of the expression. Use estimation to check your answer.

1) $234 \div 9$

2) $\dfrac{986}{58}$

3) $\dfrac{6096}{30}$

4) $45{,}691 \div 28$

5) Find the quotient of 9920 and 320.