We will have a test on Thursday and Friday! Have your homework out ready to check!

Solve each <u>multiplication</u> or <u>division</u> word problem. SHOW WORK

1) Leonardo had $1\frac{3}{4}$ of a pizza left over from a party. He wants to equally share the pizza with his friends. How many people can Leonardo give pizza if each slice of pizza is $\frac{1}{8}$ of the whole pizza?

$$1\frac{3}{4} \div \frac{1}{8} \longrightarrow \frac{7}{4} \div \frac{1}{8} \longrightarrow \frac{7}{14} \cdot \frac{8^2}{1} = \frac{14}{1} \quad \boxed{14 \text{ People}}$$

2) Sam and Trish are making signs for the Lock In. Sam can make a sign in $\frac{3}{4}$ of an hour, Trish can make a sign in $\frac{2}{3}$ of an hour.

   A) How many signs can each person make in 4 hours?

Sam $\quad 4 \div \frac{3}{4} \longrightarrow \frac{4}{1} \cdot \frac{4}{3} = \frac{16}{3} = 5\frac{1}{3}$ Signs $\quad$ Trish $4 \div \frac{2}{3} \longrightarrow \frac{4}{1} \cdot \frac{3}{2} = \frac{6}{1} = 6$ signs

   B) Who is making signs at a faster rate? How do you know?

Trish, she makes one sign in less time. $\quad \frac{3}{4} \geq \frac{2}{3}$

$\frac{9}{12} \quad \frac{8}{12}$

1

3) A kitten eats $\frac{1}{3}$ cup of cat food. Another cat in the same house eats $2\frac{1}{2}$ times as much. How much does the second cat eat?

$$\frac{1}{3} \cdot 2\frac{1}{2} \rightarrow \frac{1}{3} \cdot \frac{5}{2} = \frac{5}{6} \text{ of a cup}$$

4) How many bows can you make from $5\frac{3}{5}$ meters of ribbon if making a bow takes $\frac{2}{5}$ of a meter of ribbon?

$$5\frac{3}{5} \div \frac{2}{5} \rightarrow \frac{28}{5} \div \frac{2}{5} \rightarrow \frac{\overset{14}{\cancel{28}}}{\cancel{5}} \cdot \frac{\cancel{5}}{\cancel{2}_1} = \frac{14}{1}$$

14 bows

5) Of the 75 students in the 7th grade, three-fifths have a cell phone. How many students have a cell phone?

$$75 \cdot \frac{3}{5} \rightarrow \frac{\overset{15}{\cancel{75}}}{1} \cdot \frac{3}{\cancel{5}_1} = \frac{45}{1} = 45 \text{ students}$$

6) Jason has $3\frac{3}{4}$ foot long fruit roll up and decides to give $\frac{1}{3}$ of his fruit roll up to his friend. How much fruit roll did he give his friend?

$$3\frac{3}{4} \cdot \frac{1}{3} \rightarrow \frac{5}{4}\cancel{\frac{15}{4}} \cdot \frac{1}{\cancel{3}1} = \frac{5}{4} \left(= 1\frac{1}{4} \text{ ft of rollup} \right)$$

7) Solve the following problems and then answer the questions that follow.

$$\frac{3}{4} \times \frac{1}{2} = \frac{3}{8}$$

$$\frac{3}{4} \div \frac{1}{2} = 1\frac{1}{2}$$

$$\frac{3}{4} \cdot \frac{2}{1} = \frac{6}{4} = 1\frac{2}{4} = 1\frac{1}{2}$$

A) When you multiply by a fraction between 0 and 1 is the product larger or smaller? Why do you think this is the case?

Smaller, when multiplying by $\frac{1}{2}$ it's like dividing by 2

B) When you divide by a fraction between 0 and 1 is the quotient larger or smaller? Why do you think this is the case?

Larger, when dividing by $\frac{1}{2}$ it's like multiplying by 2

8) Solve the following problems and then answer the questions that follow.

$$\frac{3}{4} \times 2\frac{1}{2} =$$

$$\frac{3}{4} \cdot \frac{5}{2} = \frac{15}{8} \left(1\frac{7}{8}\right)$$

$$\frac{3}{4} \div 2\frac{1}{2} =$$

$$\frac{3}{4} \div \frac{5}{2}$$

$$\frac{3}{4} \cdot \frac{2}{5} = \left(\frac{3}{10}\right)$$

A) When you multiply by a mixed number greater than 1 is the product larger or smaller? Why do you think this is the case?

$1\frac{7}{8} > \frac{3}{4}$ Larger, multiplying by numbers greater than 1 is like normal multiplication. Ex: $3 \cdot 4 = 12$ $12 > 3$

B) When you divide by a mixed number greater than 1 is the quotient larger or smaller? Why do you think this is the case?

$\frac{3}{10} < \frac{3}{4}$ Smaller, dividing by numbers greater than 1 is like normal division. $20 \div 5 = 4$ $4 < 20$

1) Find the value of each number.

The absolute value of a number is the distance that number is from zero. We always use **positive** numbers to describe a distance.

A) $|11| =$ 11

B) $|-5| =$

C) $|-27| =$

D) $|8| =$

2) Solve the following equations involving absolute value.

a) Find the absolute value of the numbers in the problem and write them below.
b) Rewrite the problem using the $+/-$ between the two numbers and solve
****Problem F has TWO answers. See if you can find both of them!*

A) $|15| + |-4| =$ 19
15 + 4

B) $|-9| - |6| =$

C) $|-3| + |-10| =$

D) $7 - |11| =$

E) $|12| - |-6| =$

F) $|\_\_\_\_| = 8$

3)

A) $-6 + 3 = -3$

Start @ -6 and move 3 to the right

B) $-2 + (-9) = -11$

Start @ -2 and move 9 to the left.

4) Describe how you would move a number line in the following subtraction problems.

A) $-4-7$ Start at ___-4___ and move

___7___ to the ___left___.

$=-11$

B) $3-(-5)$ Start at ___3___ and move

___5___ to the ___right___.

$=8$

5) Use the number lines to solve the following addition and subtraction problems.
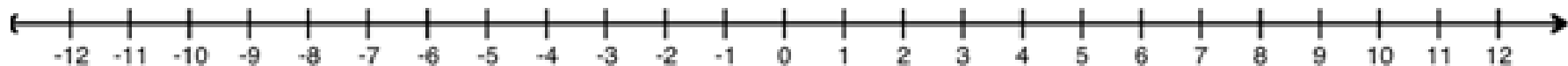
A) $-5+(-4)=$ B) $6-9=$ C) $-5-(-3)=$ D) $-6+10=$
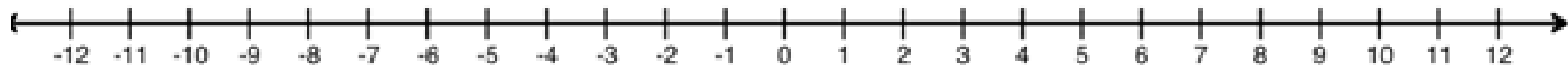
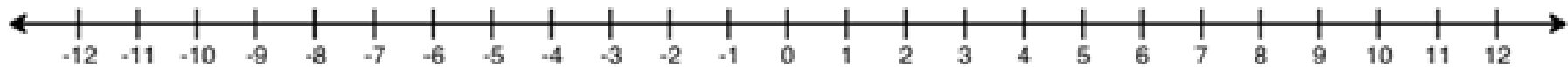E) $-3-(-4)=$ F) $4+(-11)=$ G) $9-15=$ H) $-7+10=$

I) 5 – 7   J) 4 – (–4)   K) –6 + 2   L) –4 + (–9)

M) –10 – 3   N) –2 – (–7)   O) –5 + 8   P) 3 + (–7)

6) Determine if each statement below is *Always True, Sometimes True,* or *Never True.* Then give at least two examples to justify your answer.

A) If a positive integer is subtracted from a negative integer, the difference is a negative integer.

Circle One: ⟨Always True⟩   Sometimes True   Never True

Examples→ $-1-3$ = -4 $-5-1$ = -6

B) The difference of a negative integer and a negative integer is positive.

Circle One: Always True   ⟨Sometimes True⟩   Never True

Examples→ $-1-(-4)$ = 3 $-3-(-2)$ = -1

C) If a negative integer is added to a positive integer, the sum is a negative integer.

Circle One: **Always True**   (**Sometimes True**)   **Never True**

Examples→ $2 + (-3) = -1$ $6 + (-2) = 4$

D) If a negative integer is added to a negative integer the sum is a positive integer

Circle One: **Always True**   **Sometimes True**   (**Never True**)

Examples→ $-2 + (-4) = -6$ $-5 + (-1) = -6$

7) Solve the following multiplication and division problems.

A) $7 \cdot (-6) = -42$ B) $-2 \cdot (-6) = 12$ C) $-3 \cdot 8 =$ D) $4 \cdot (-12) =$

E) $-3 \cdot (-6) =$ F) $5 \cdot (-10) =$ G) $-6 \cdot (-1)(-8)$ H) $-4 \cdot (5)(-2)$

I) $\frac{-24}{6} = $ **~4**   J) $\frac{-32}{-4} = $ **8**   K) $\frac{-66}{11} = $ _____   L) $\frac{30}{-5} = $ _____

because, **~4** · **6** = -24

M) $\frac{56}{-8} = $ _____   N) $\frac{-50}{-5} = $ _____   O) $\frac{-28}{4} = $ _____   P) $\frac{-96}{-8} = $ _____

8) Write a number sentence using integers that describes each situation. Then explain what your integer answer means in the context of the situation.

Operation Clue Words

A) The Panama Canal was 50 meters deep at noon. The water then began to drop 4 meters per hour. How deep is the canal at 5 pm?

B) **Part 1** - The temperature one cold evening is 4°F. That night the temperature drops 9°F before reaching the low for the night. What is the low temperature for the night?

Addition	Subtraction	Multiplication	Division
• in all	• fewer	• total	• how many each
• total	• left	• in all groups	• how many groups
• all together	• how much change	• all together	• divided
• sum	• how many more	• area	• equally
• both	• how much more	• times	• shared equally
• combined	• less	• rate	
• altogether	• difference	• twice/double	• separated
• how many	• minus	• of	• split
• perimeter	• remains	• product	• parts
• and	• take away		• quotient
• increase	• decrease		
• deposit	• withdraw		
• ascend	• descend		

B) **Part 2** -The temperature the next day increases by 10°F before reaching the high for the day. What was the high temperature for the day?

C) A group of buddies go spend the day golfing. The list of integers below are the scores of each individual player. What would the group's average score be?

$$-3, \ 2, \ 5, \ -8, \ -1$$

Note*
How do you find average (a.k.a. the mean) of a group of numbers?

D) Paul has a bank balance of $12 below zero at the start of the month. Paul then deposits $20 into his bank account. What is his new balance?

9) Find the decimal value of each fraction by either using long division or making the denominator a power of 10. Put you answer in the space provided and then CIRCLE whether the decimal is terminating or repeating.
SHOW WORK

A) $\dfrac{13}{20}$ = _____

Circle One → Terminating or Repeating

$20\overline{)13}$

B) $\dfrac{1}{6}$ = _____

Circle One → Terminating or Repeating

$6\overline{)1.}$

C) $2\frac{5}{12}$= _____

D) $8\frac{4}{5}$= _____

Circle One → Terminating or Repeating

Circle One → Terminating or Repeating

10) Write each decimal as a fraction or mixed number **in simplest form**. SHOW WORK

A) 0.3 = _____

B) 4.65 = _____

C) 7.18 = _____