

Get out your homework from last night and have it ready to check.
TEST TOMORROW AND FRIDAY!

Classwork - Test Review #2

1) Find the value of each number.

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

A) $|11| = 11$

B) $|-5| = 5$

C) $|-27| = 27$

D) $|8| = 8$

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

B) $|-9| - |6| =$
 $9 - 6 = 3$

C) $|-3| + |-10| =$
 $3 + 10 = 13$

D) $7 - |11| =$
 $7 - 11 = -4$

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

F) $|\underline{\quad}| = 8$
 $-8 \text{ and } 8$

3) Describe how you would move a number line in the following addition problems.

A) $-6 + 3$ Start at -6 and move
3 to the Right.

B) $-2 + (-9)$ Start at -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.

B) $3 - (-5)$ Start at 3 and move
5 to the right.

5) Use the number lines to solve the following addition and subtraction problems.

A) $-5 + (-4) = -9$

B) $6 - 9 = -3$

C) $-5 - (-3) = -2$

D) $-6 + 10 = 4$



E) $-3 - (-4) = 1$

F) $4 + (-11) = -7$

G) $9 - 15 = -6$

H) $-7 + 10 = 3$

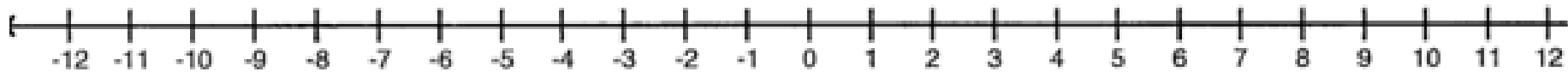


I) $5 - 7 = -2$

J) $4 - (-4) = 8$

K) $-6 + 2 = -4$

L) $-4 + (-9) = -13$

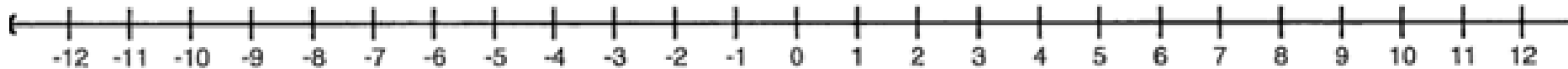


M) $-10 - 3 = -13$

N) $-2 - (-7) = 5$

O) $-5 + 8 = 3$

P) $3 + (-7) = -4$



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 → $-4 - 5 = -9$ $-1 - 2 = -3$

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

Circle One: Always True Sometimes True Never True

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

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 → $1 + (-2) = -1$ $5 + (-1) = 4$

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 → $-1 + (-2) = -3$ $-4 + (-1) = -5$

7) Solve the following multiplication and division problems.

A) $7 \cdot (-6) = -42$

B) $-2 \cdot (-6) = 12$

C) $-3 \cdot 8 = -24$

D) $4 \cdot (-12) = -48$

E) $-3 \cdot (-6) = 18$

F) $5 \cdot (-10) = -50$

G) $-6 \cdot (-1)(-8) = -48$

H) $-4 \cdot (5)(-2)$
 40

$$I) \frac{-24}{6} = \underline{-4}$$

$$J) \frac{-32}{-4} = \underline{8}$$

$$K) \frac{-66}{11} = \underline{-6}$$

$$L) \frac{30}{-5} = \underline{-6}$$

cause, $\underline{6} \cdot \underline{-4} = -24$

$$M) \frac{56}{-8} = \underline{-7}$$

$$N) \frac{-50}{-5} = \underline{10}$$

$$O) \frac{-28}{4} = \underline{-7}$$

$$P) \frac{-96}{-8} = \underline{12}$$

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

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?

$$-4(5) = -20$$

$$50 - 20 = \boxed{30 \text{ meters}}$$

4°F

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?

$$4 - 9 = \boxed{-5^\circ\text{F}}$$

Operation Clue Words

Addition	Subtraction	Multiplication	Division
<ul style="list-style-type: none"> • in all • total • all together • sum • both • combined • altogether • how many • perimeter • and • increase • deposit • ascend 	<ul style="list-style-type: none"> • fewer • left • how much change • how many more • how much more • less • difference • minus • remains • take away • decrease • withdraw • descend 	<ul style="list-style-type: none"> • total • in all groups • all together • area • times • rate • twice/double • of • product 	<ul style="list-style-type: none"> • how many each • how many groups • divided • equally • shared • equally • separated • split • parts • quotient

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?

$$-5 + 10 = \boxed{5^{\circ}\text{F}}$$

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

$$-3 + 2 = -1 + 5 = 4 + (-8) = -4 + (-1) = -5$$

$$-5 \div 5 = \boxed{-1} \quad \text{The ~~average~~ ^{average} score was -1}$$

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?

$$-12 + 20 = 8$$

$$\boxed{\$8}$$

9)

A) $\frac{13}{20} = 0.65$

Circle One → Terminating or Repeating

$$\frac{13 \cdot 5}{20 \cdot 5} = \frac{65}{100} \quad \text{or} \quad \begin{array}{r} 0.65 \\ 20 \overline{) 13.00} \\ \underline{-120} \\ 100 \\ \underline{-100} \\ 0 \end{array}$$

B) $\frac{1}{6} = 0.1\bar{6}$

Circle One → Terminating or Repeating

$$\begin{array}{r} 0.1\bar{6} \\ 6 \overline{) 1.000} \\ \underline{-6} \\ 40 \\ \underline{-36} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

C) $2\frac{5}{12} = 2.41\bar{6}$

Circle One → Terminating or Repeating

$$\begin{array}{r} 0.41\bar{6} \\ 12 \overline{) 5.0000} \\ \underline{-48} \\ 20 \\ \underline{-12} \\ 80 \\ \underline{-72} \\ 80 \\ \underline{-72} \\ 80 \\ \underline{-72} \\ 8 \end{array}$$

D) $8\frac{4}{5} = 8.8$

Circle One → Terminating or Repeating

$$\frac{4 \cdot 2}{5 \cdot 2} = \frac{8}{10} = 0.8 \quad \text{or} \quad \begin{array}{r} 0.8 \\ 5 \overline{) 4.0} \\ \underline{-40} \\ 0 \end{array}$$

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

A) $0.3 = \frac{3}{10}$

B) $4.65 = 4\frac{13}{20}$

C) $7.18 = 7\frac{9}{50}$

$$\frac{65 \div 5}{100 \div 5} = \frac{13}{20}$$

$$\frac{18 \div 2}{100 \div 2} = \frac{9}{50}$$

1) Complete the table by following the directions at the top of each column.

Write an Equivalent Fraction	Reduce Simplify the fraction	Change the improper fraction to a mixed number	Write the mixed number as an improper fraction
* $\frac{1}{2} = \frac{2}{4}$	$\frac{5}{10} \stackrel{\div 5}{=} \frac{1}{2}$	$\frac{5}{4} = 1\frac{1}{4}$	$2\frac{1}{2} = \frac{5}{2}$
$\frac{2}{5} =$	$\frac{4}{6} =$	$\frac{10}{7} =$	$6\frac{1}{8} =$
$\frac{3}{4} =$	$\frac{16}{20} =$	$\frac{20}{12} =$	$4\frac{3}{15} =$
$\frac{7}{8} =$	$\frac{10}{18} =$	$\frac{14}{4} =$	$5\frac{7}{8} =$

2) Solve each addition/subtraction problem involving fractions and mixed numbers.

Reminder: Make sure you have common denominators before adding or subtracting.

A) $\frac{4}{7} + \frac{6}{7} =$

B) $-\frac{4}{9} - \frac{1}{3} =$

C) $\frac{5}{6} + \frac{3}{4} =$

D) $\frac{3}{4} - \frac{11}{12} =$

E) $5\frac{2}{7} + 4\frac{3}{7} = \boxed{9\frac{5}{7}}$

F) $4\frac{2}{5} - 3\frac{1}{5} =$

$\frac{9}{12} - \frac{11}{12} = \frac{-2}{12} \div 2 = \boxed{-\frac{1}{6}}$

G) $10\frac{7}{8} + 3\frac{3}{8} =$

H) $5\frac{1}{6} + 11\frac{5}{9} =$

I) $6\frac{1}{2} + 7\frac{7}{10} =$

$$J) 4\frac{3}{4} - 1\frac{2}{5} =$$

$$* K) 9 - 7\frac{4}{5} =$$

$8\frac{5}{5} - 7\frac{4}{5}$

 $1\frac{1}{5}$

$7 + \frac{6}{6} + \frac{1}{6}$

$$* L) 8\frac{1}{6} - 3\frac{2}{3} =$$

$8\frac{1}{6} - 3\frac{4}{6}$
 $7\frac{7}{6} - 3\frac{4}{6}$
 $4\frac{3}{6}$

3) Find the product of the following multiplication problems.

- Reminders:
- 1) You don't need common denominators.
 - 2) Turn mixed numbers into improper fractions.
 - 3) Look to cross simplify if possible. Multiply straight across

$$A) \frac{1}{3} \times \frac{9}{10} =$$

$$B) \frac{1}{6} \times \frac{6}{11} =$$

$$C) 5 \times \frac{6}{11} =$$

$1 \times \frac{2}{11} = \frac{2}{11}$

$$\text{D) } 3 \times 5\frac{2}{3} =$$

$$\text{E) } 4\frac{3}{5} \times 6 =$$

$$\text{F) } 2\frac{1}{4} \times 4\frac{2}{3} =$$

$$\text{G) } \frac{3}{4} \times 5\frac{1}{5} =$$

$$\text{H) } 3\frac{1}{8} \times 9\frac{3}{5} =$$

$$\text{I) } \frac{8}{9} \times 3\frac{3}{4} =$$

4) Find the quotient of the following division problems.

Reminders:

- 1) You don't need common denominators.
- 2) Turn mixed numbers into improper fractions.
- 3) Use the process **SAME** → **CHANGE** → **FLIP** to turn the division problem into a multiplication problem.
- 4) Look to cross simplify if possible. Multiply straight across

$$A) \frac{3}{5} \div \frac{7}{10} =$$

$$B) \frac{1}{4} \div \frac{1}{2} =$$

$$C) \frac{4}{5} \div \frac{8}{15} =$$

$$D) \frac{3}{8} \div 2\frac{1}{4} =$$

$$E) 5 \div \frac{2}{3} =$$

$$F) 1\frac{5}{8} \div 1\frac{1}{4} =$$

$$\begin{aligned} & 1\frac{5}{8} \div 1\frac{1}{4} \\ & \frac{13}{8} \div \frac{5}{4} \\ & \frac{13}{8} \cdot \frac{4}{5} \\ & \frac{13}{2} \cdot \frac{1}{5} \\ & = \frac{13}{10} \end{aligned}$$

5) Solve the following word problems. Write out the addition, subtraction, multiplication, or division problem you solved to find your answer. Circle any key words they help you decide what operation to use. SHOW WORK

A) A landscaper is building a retaining wall that is $16\frac{2}{3}$ feet long. The blocks used for each row of the wall are $\frac{5}{6}$ of a foot long. How many blocks does he need for each row?

$$16\frac{2}{3} \div \frac{5}{6}$$

B) Sam works $8\frac{7}{9}$ hours in day 1 and $6\frac{1}{2}$ in day 2. How many total hours does he work in both days?

$$8\frac{7}{9} + 6\frac{1}{2}$$

C) A field trip is planned which is 10 miles from school. A wheel on the of the school bus is punctured after $5\frac{3}{5}$ miles. How many miles are left to reach the field trip location?

$$10 - 5\frac{3}{5}$$

D) The recipe for a strawberry smoothie calls for $1\frac{3}{5}$ cups of strawberries. If you want to double the recipe, how many cups of strawberries do you need?

$$1\frac{3}{5} \cdot 2$$

E) Sarah runs $3\frac{1}{10}$ miles in $\frac{3}{5}$ of an hour. What is her speed in miles per hour?

Hint: $\frac{\text{miles}}{\text{hour}} = \text{miles per hour}$

$$\text{miles} \div \text{hours}$$

F) Hank is watching a movie and the power goes out. The total length of the movie is $2\frac{4}{5}$ hours. Hank managed to watch only $1\frac{1}{4}$ hours. How much time is left to finish the movie?

G) Hank is selling slices of pizza at a basketball game and has $4\frac{1}{8}$ pizzas left at the beginning of the second half. He ends up selling $\frac{2}{3}$ of the remaining pizza in the second half. How much of the remaining pizza did he sell in the second half.