## Name:

All rising Math 7 students must complete this packet over the summer. There will be help sessions offered to students who need assistance completing this assignment. Please check the Mark Twain Middle School website for information regarding the dates and times for this summer's sessions.
This assignment is due for
Math $\mathbf{7}$ students on the first day of school:
August 26th 2019
**Students will be assessed during the first week of
school on the topics in this packet**

- Adding and Subtracting

I . Find a common denominator
I - Add or subtract the numerators, but leave the denominator the same
Example: $\quad 3 \frac{2}{3} \leqslant^{8} 3 \frac{2}{6}$

$$
-1 \frac{5}{6}=1 \frac{5}{6}
$$



Solve. Show all work and circle your answer.

1) $3 \frac{3}{4}+2 \frac{5}{8}=$
2) $7 \frac{1}{3}-2 \frac{3}{4}=$
3) $24 \frac{1}{3}-19 \frac{2}{3}=$

Multiplying Fractions:

- Change mixed numbers to improper fractions
- Multiply straight across. Change improper fractions back into mixed numbers.

Example: $\quad 3 \frac{1}{2} \times \frac{8}{10}=$

$$
\frac{7}{2} \times \frac{8}{10}=\frac{56}{20}=\frac{14}{5}=2 \frac{4}{5}
$$

Dividing Fractions:

- Change mixed numbers to improper fractions.
- Find the reciprocal of the $2^{\text {nd }}$ fraction (flip it)
- Multiply straight across.

Example: $2 \frac{3}{4} \div \frac{5}{6}=$

$$
\begin{aligned}
& \left.\frac{11}{4}\right] \div \frac{5}{6}= \\
& \frac{11}{4} \times \frac{6}{5}=\frac{66}{20}=\frac{33}{10}=3 \frac{3}{10}
\end{aligned}
$$

Solve. Show all work and circle your answer.
4) $4 \frac{1}{4} \times 7=$
5) $28 \div 3 \frac{1}{2}=$
6) You have $2 \frac{5}{8}$ pizzas left over. If you share them equally with 9 people, how much will each person get?

How to convert a fraction (1/8) to a decimal (.)

| 1. Identify the top number <br> (numerator) of your fraction and <br> the bottom number <br> (denominator). | $1 \rightarrow$ Numerator |
| :--- | :--- |
| 2. Divide the top number <br> (numerator) of your fraction by the <br> bottom number (denominator) | $1 \div 8=$ Denominator |

How to convert a decimal (.) to a percent \%.

| 1. Complete the previous steps. <br> Once you have a decimal you <br> multiply your answer by 100. | $\div 1 \div 8=0.125$ |
| :---: | :---: |
| 2.Solve. | $0.125 \times 100=12.5$ |
| 3. Add a $\%$ sign to your answer. | $12.5=12.5 \%$ |

## PRACTICE

| FRACTION | DECIMAL | PERCENT |
| :---: | :---: | :---: |
| $1 / 8$ | 0.125 | $12.5 \%$ |
| $1 / 4$ |  |  |
| $3 / 5$ |  |  |
| $4 / 9$ |  |  |
| $9 / 10$ |  |  |

$$
\begin{array}{ll}
.18 . \% & \rightarrow 0.18 \\
.22 .7 \% & \rightarrow 0.227
\end{array} \quad \frac{1}{4}=0.25 \quad \frac{6}{5}=1.2
$$

1. Plot $\frac{2}{3}$ on the number line below:

2. Order the following numbers from greatest to least.

$$
\frac{2}{3}, 68 \%, 0.61
$$

3. Order the following numbers from greatest to least.

$$
\frac{7}{8}, 88 \%, 0.85
$$

Compare using < or > 4.
a. $\frac{3}{4} \frac{7}{12}$
b. $\frac{2}{3} \quad \frac{6}{7}$
C. $\frac{3}{8} \frac{6}{11}$
d. $\frac{1}{5} \quad \frac{1}{4}$
5. Compare using $>$ or $<$.

A: $\quad 0.310 \quad 0.275$
B: $\quad 0.325 \quad 0.310$
C: $\quad 0.325 \quad 0.275$
D: $\quad 0.310 \quad 0.325$
6. Which digit makes the statement true?

$$
6.8 \square 9 \geq 6.849
$$

A: 0
B: 2
c: 3
D: 4

## Absolute Value

Absolute value is the distance a number is from zero.
Absolute value must always be positive.

-12 is $\mathbf{1 2}$ units away from $0 . \quad|-12|=12$

## Example 2:



Find the absolute value.

1. $|-1|$
2. $|-14|$
3. $|0|$
4. $|6|$
5. $|-2.5|$
6. Circle all TRUE Statements!
$|-5.9|=-5.9$
$|-8.7|=8.7$
17 = |17|
$|-3|=|3|$
$-6=|6|$
$4.5=|-4.5|$
7. 

The absolute value of $-\mathbf{4}$ is equivalent to A: 4

B: $\quad-4$
c: 4 or -4
D: 0
8.

Which of the following is true?
A: $\quad|43|=-43$
B: $\quad|-75|=-75$
c: $\quad-32=|32|$
D: $\quad 97=|-97|$

# Comparing, Ordering, and Representing Integers 

## No Calculator

Integer: whole numbers and their opposities

## 1. Circle all of the situations

 below that could be represented by a negative integer.
## Money you have saved <br> Money you owe

Feet above sea level
Feet below sea level
Floors above the ground floor
Floors below the ground floor
3. Circle all of the integers below:
21

4.

What number is represented by point $P$ on the number line?
5.


An elevator starts on the bottom floor and goes to the 5th floor. It then goes down 3 floors and stops. Which number line best models the position of the elevator?
A:

B:

c:

D:


Identify which number is greater by using < (less than) or > (greater than)
5. $-5 \square 6$
6. $\square$ -9

## Order of Operations

| G | First, solve the operations inside of grouping symbols. | Example: $8-4 \div 2+3 \cdot 5$ |
| :---: | :---: | :---: |
| E | Second, solve the exponents. | $8-2+3 \cdot 5$ |
| MD | Third, solve all multiplication and division from LEFT $\rightarrow$ RIGHT. | $\begin{aligned} & 8-2+15 \\ & 6+15 \end{aligned}$ |
| AS | Fourth, solve all addition and subtraction from LEFT $\rightarrow$ RIGHT. | (21) |

Directions: Show all work. Circle your answer.

1. $9-2^{3}$
2. $72-(7+8) \cdot 4$
3. $(8-5)^{2}-4 \cdot \frac{1}{4}$
4. What is the value of $\frac{2^{2}-1}{2}$ ?

Your answer must be in the form of an improper fraction.
3. $6-3^{2} \div 3 \cdot 2$
4. $5^{2}-4 \cdot(5-3)$
8. When simplifying the following,
using order of operations,
which operation should be performed first?
$25+8 \div 2 \cdot 4-3$
5. $\frac{6+30 \div 3}{8 \div 4 \cdot 2}$

A: $\quad 25+8$
B: $\quad 8 \div 2$
C: $\quad 2.4$
D: 4-3

