

# My Math Notebook

Mathematicians use notebooks to record data, make drawings, ask questions and much more.

Your notebook is a mathematical tool that will represent you and your experience in mathematics this school year. Your math notebook will be used daily, so be responsible and make sure that you bring it to class every single day. If you are absent, make sure you complete any pages in the notebook that you missed.

All notebook activities must follow some rules to make them interesting as well as informative.

## Rules:

- 1) Write neatly and legibly
- 2) Create a cover page.
- 3) Create a table of contents.
- 4) Number the pages
- 5) Title and date each page.
- 6) Copy everything Ms. Tate writes.
- 7) Use colors for notes, but do all math work in pencil.

## Reasons:

- ✓ To be able to go back and read past examples and activities
- ✓ It's your notebook, make it yours!
- ✓ Organization!
- ✓ Organization!
- ✓ Organization!
- ✓ Ms. Tate would not write anything that is not valuable to your learning.
- ✓ Colors are great, but using pencil for all work lets you erase any mistakes!

I, \_\_\_\_\_, will do my best to abide by the rules.

## Ms. Tate's Grading Policy:

Each marking period, your final grade will be determined as follows:

- Test: 35%
- Quizzes: 30%
- Classwork: 20%
- Homework: 10%
- Warmups: 5%

## Notes About Homework:

- Homework will be checked daily & will be given a grade of 2, 1, or 0.

Score	Criteria
2	Completed, neat homework, done in pencil, work completely shown for all problems
1	Incomplete work, just answers, no work shown
0	Missing homework

- **Homework Policy:** 10 points will be deducted from late homework assignments each day it is late. Assignments will not be accepted after 5 days, these incomplete assignments will be a 0.
- Homework will not be graded on correctness; it will be graded based upon effort.
- If a student misses 3 homework assignments within a two-week period, their parents will be notified and they will get assigned an after school detention.

## Notes About Test/Quizzes:

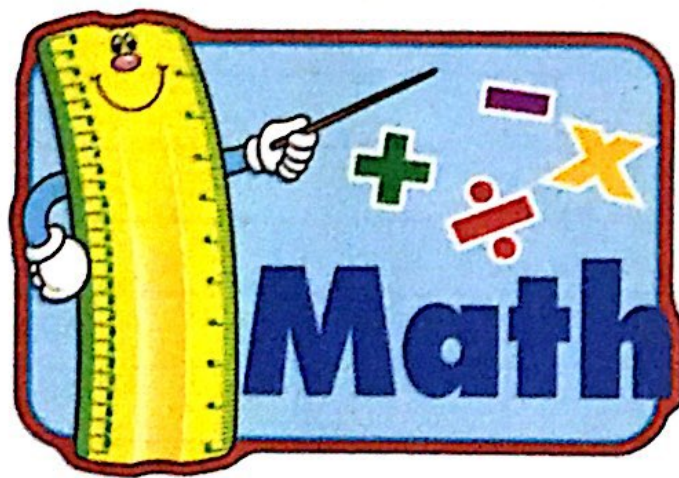
- Tests will be given at the end of each unit. Tests will be announced at least a week in advance and a study guide will be given.
- Quizzes are given at the end of each concept. Quizzes will be announced at least two days in advance.
- If you fail a test or a quiz, the student will be remediated and then a retake will be given. The highest grade will be recorded in the gradebook.

## Additional Information about the Class:

- Class participation is extremely important. You are expected to come to class prepared, complete all assignments with effort, take all notes, and partake in class activities.
- No assignments (Classwork, homework, projects, etc) will be accepted after the closing of the grading period

This notebook will be checked after every quiz given. The students will turn in their notebook while they take their quizzes. All of your notebook grades will be averaged for each grading period. That grade will count as a test grade.

# 1<sup>st</sup> Nine Weeks



Welcome to the  
***Non-Calculator Skills***

# NOTES

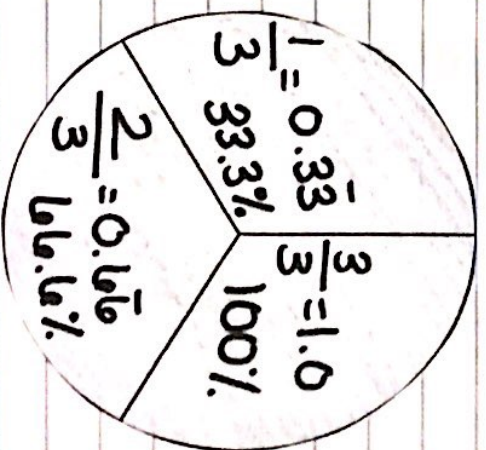
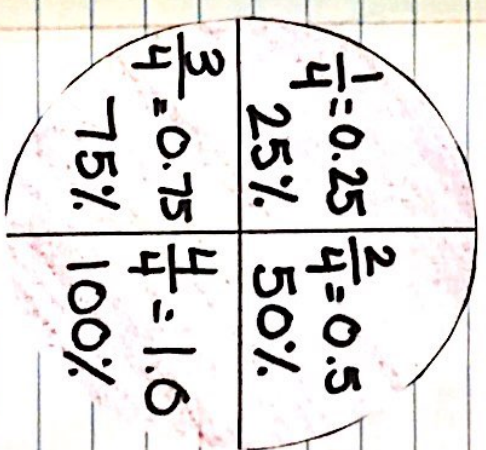
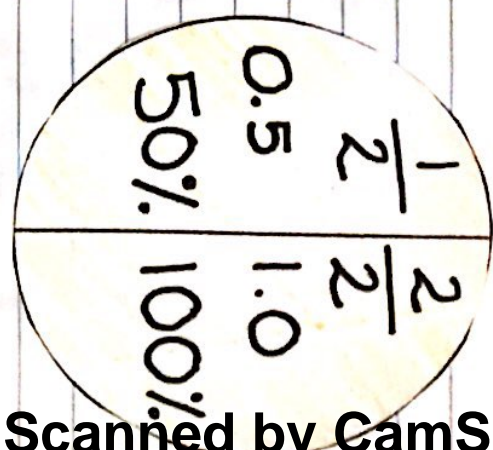
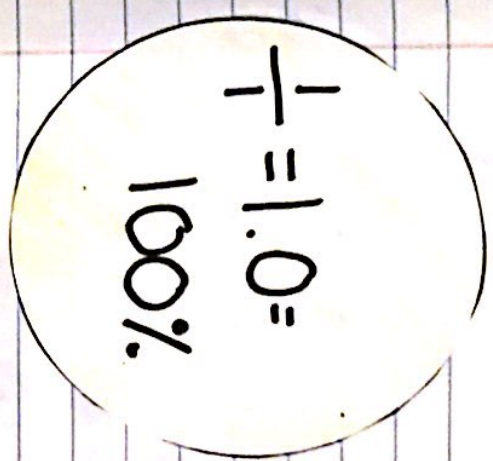
Common Equivalent Fractions, Decimals, and Percentages

Fraction	Decimal	Percent (%)
$\frac{1}{4}$	0.25	25%
$\frac{1}{2}$	0.50	50%
$\frac{3}{4}$	0.75	75%
$\frac{1}{10}$	1.00	100%
$\frac{2}{10}$	0.20	20%
$\frac{4}{10}$	0.40	40%
$\frac{6}{10}$	0.60	60%
$\frac{8}{10}$	0.80	80%
$\frac{1}{3}$	0.33	33.3%
$\frac{2}{3}$	0.66	66.6% & 67%
$\frac{1}{8}$	0.125	12.5%
$\frac{3}{8}$	0.375	37.5%
$\frac{5}{8}$	0.625	62.5%
$\frac{7}{8}$	0.875	87.5%
$\frac{1}{100}$	0.10	10%
$\frac{3}{100}$	0.30	30%
$\frac{7}{100}$	0.70	70%
$\frac{9}{100}$	0.90	90%

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# NOTES

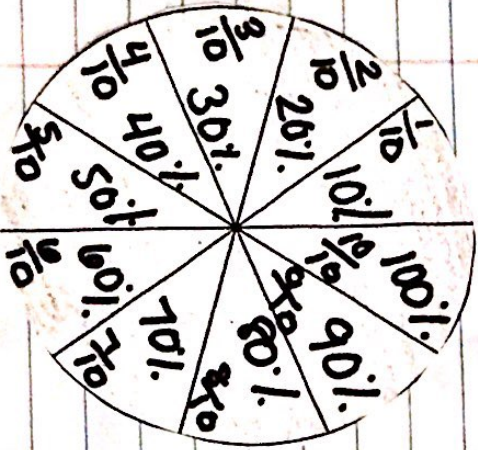
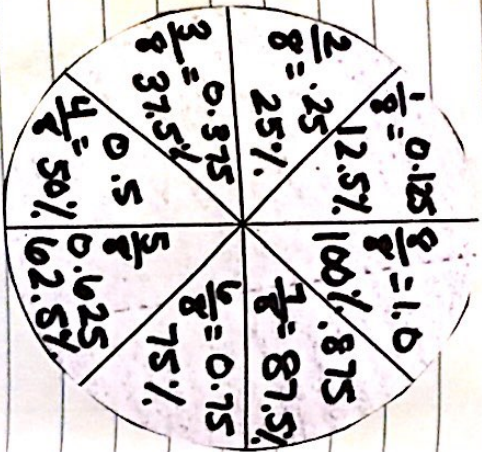
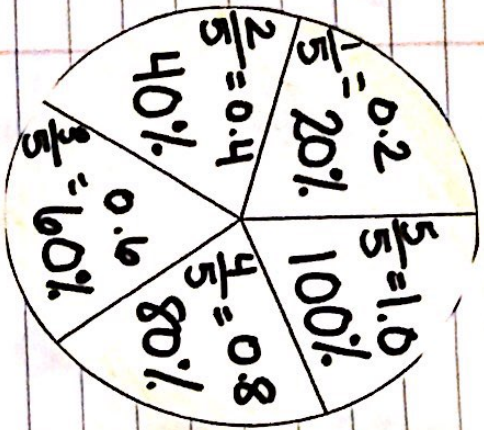
Fraction Circles



2

# NOTES

Fraction Circles



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## Simplifying Fractions

Notes

# 1 # 2 # 3 # 4 # 5 # 6

**Six Questions to Ask when Simplifying Fractions**

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# Converting Mixed Numbers to Improper Fractions

## Notes

Rule #1: Multiply to denominator to the whole number

Ex:  $2\frac{1}{4}$  multiply:  $4 \times 2 = 8$

Rule #2: Add the answer to Rule #1 to the numerator (number on top)

Ex:  $2\frac{1}{4}$  put answer for #1 up here  
 $8 + 1 = 9$

Rule #3: Put the answer to Rule #2 on the top and leave the original denominator

Ex:  $\frac{9}{4}$  😊

### Additional Examples/Practice:

Example #1:  $3\frac{4}{5} = 3\frac{15+4}{5} = 15+4 = \frac{19}{5}$

Example #2:  $1\frac{8}{9} = 1\frac{9+8}{9} = 9+8 = \frac{17}{9}$

# Converting Mixed Numbers to Improper Fractions

Practice

$4\frac{1}{6} = \underline{\hspace{2cm}}$

$4\frac{1}{6} = \frac{25}{6}$

$8\frac{3}{5} = \underline{\hspace{2cm}}$

$8\frac{3}{5} = \frac{43}{5}$

$3\frac{1}{2} = \underline{\hspace{2cm}}$

$3\frac{1}{2} = \frac{7}{2}$

$5\frac{3}{5} = \underline{\hspace{2cm}}$

$5\frac{3}{5} = \frac{28}{5}$

# Homework

1.  $3\frac{1}{2} =$          

$3\frac{1}{2}$  (6)  $\frac{7}{2}$

2.  $7\frac{1}{5} =$          

$7\frac{1}{5}$  (35)  $\frac{36}{5}$

3.  $4\frac{2}{3} =$          

$4\frac{2}{3}$  (12)  $\frac{14}{3}$

4.  $7\frac{1}{6} =$          

$7\frac{1}{6}$  (42)  $\frac{43}{6}$

## Converting Improper Fractions to Mixed Numbers

### Notes

Rule #1: Divide the denominator into the numerator

Ex:  $\frac{11}{2}$

$2\overline{)11}$

$5\frac{1}{2}$

Additional Examples/Practice:

Example #1:

$\frac{3}{2}$

$2\overline{)3}$

$1\frac{1}{2}$

Example #2:

$\frac{5}{2}$

$2\overline{)5}$

$2\frac{1}{2}$

Converting Improper Fractions to Mixed Numbers

$$\frac{58}{8} = \underline{\quad}$$

$$\begin{array}{r} 7 \\ 8 \overline{) 58} \\ \underline{56} \\ 2 \end{array}$$

$$7 \frac{2}{8} = 7 \frac{1}{4}$$

$$\frac{15}{2} = \underline{\quad}$$

$$\begin{array}{r} 7 \\ 2 \overline{) 15} \\ \underline{14} \\ 1 \end{array}$$

$$7 \frac{1}{2}$$

$$\frac{11}{4} = \underline{\quad}$$

$$\begin{array}{r} 2 \\ 4 \overline{) 11} \\ \underline{8} \\ 3 \end{array}$$

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

$$\frac{49}{9} = \underline{\quad}$$

$$\begin{array}{r} 5 \\ 9 \overline{) 49} \\ \underline{45} \\ 4 \end{array}$$

$$5 \frac{4}{9}$$

Homework

1.  $\frac{20}{3} = \underline{\quad}$

$$\begin{array}{r} 6 \\ 3 \overline{) 20} \\ \underline{18} \\ 2 \end{array}$$

$$6 \frac{2}{3}$$

2.  $\frac{13}{4} = \underline{\quad}$

$$\begin{array}{r} 3 \\ 4 \overline{) 13} \\ \underline{12} \\ 1 \end{array}$$

$$3 \frac{1}{4}$$

3.  $\frac{20}{7} = \underline{\quad}$

$$\begin{array}{r} 2 \\ 7 \overline{) 20} \\ \underline{14} \\ 6 \end{array}$$

$$2 \frac{6}{7}$$

4.  $\frac{23}{3} = \underline{\quad}$

$$\begin{array}{r} 7 \\ 3 \overline{) 23} \\ \underline{21} \\ 2 \end{array}$$

$$7 \frac{2}{3}$$

# Adding & Subtracting Fractions

Steps:

- ① Find Common Denominator
- ② Add / Subtract
- ③ Simplify (Denominator should remain the same)

Examples: #1

$$\begin{array}{r}
 2 \frac{1 \times 2}{2 \times 2} = 2 \frac{2}{4} \\
 + 1 \frac{1}{4} \rightarrow + 1 \frac{1}{4} \\
 \hline
 3 \frac{3}{4}
 \end{array}$$

Common denominator

Example #2

$$\begin{array}{r}
 3 \frac{4 \times 2}{2 \times 3} = 3 \frac{8}{6} \\
 - 1 \frac{1 \times 2}{3 \times 2} = 1 \frac{2}{6} \\
 \hline
 2 \frac{6}{6}
 \end{array}$$

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## Adding and Subtracting Mixed Fractions (A) Answers

Find the value of each expression in lowest terms.

1.  $2\frac{5}{5} + 1\frac{3}{4} = \frac{20}{20} + \frac{13}{20} = 3\frac{33}{20}$

5.  $1\frac{1}{2} + 2\frac{3}{5} = \frac{10}{10} + \frac{41}{10} = 5\frac{51}{10}$

9.  $3\frac{1}{2} - 1\frac{1}{2} = 2$

2.  $3\frac{1}{2} - 2\frac{2}{3} = \frac{6}{6} + \frac{3}{6} - \frac{14}{6} = \frac{5}{6}$

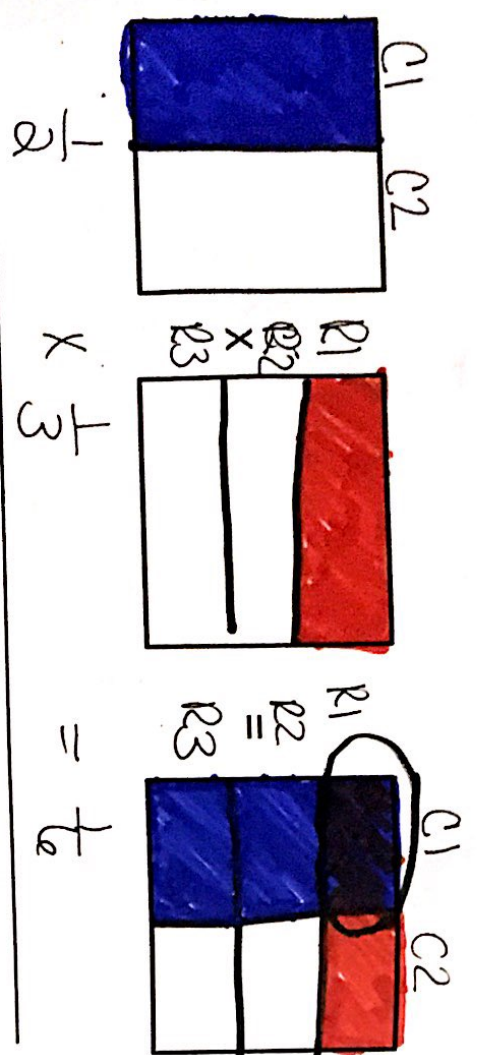
6.  $3\frac{1}{2} - 2\frac{2}{5} = \frac{17}{17} + \frac{1}{17} - \frac{25}{17} = \frac{3}{17}$

10.  $5\frac{1}{2} + 5\frac{1}{4} = \frac{43}{4} + \frac{5}{4} = 10\frac{48}{4} = 10\frac{12}{1} = 10\frac{3}{4}$

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# Modeling Multiplying Fractions



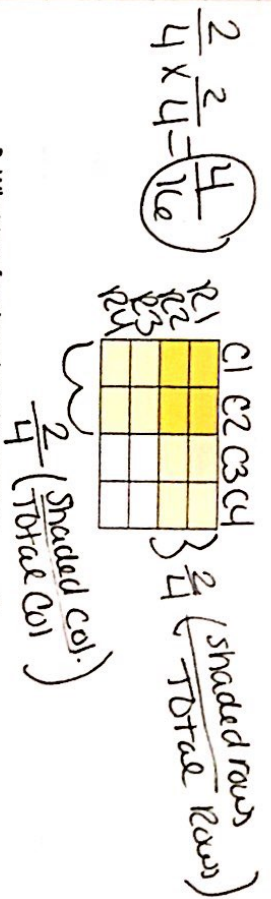
Additional observations:

$\frac{\text{Shaded columns}}{\text{Total columns}} \times \frac{\text{Shaded rows}}{\text{Total Rows}} = \frac{\text{Overlapping}}{\text{Total Squares}}$

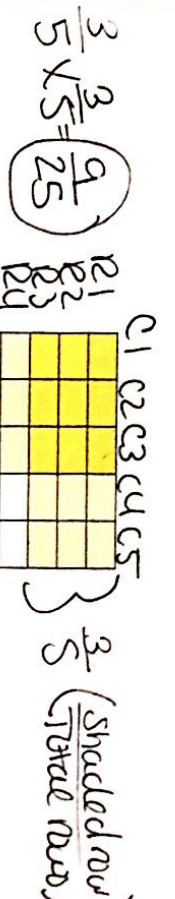
(13)

## Multiplying Fractions Using Models

1. What two fractions does the model represent?



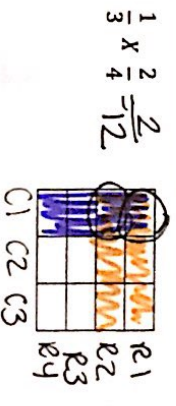
2. What two fractions does the model represent?



3. Shade the model according to the fraction:



4. Shade the model according to the fraction:



(14)

# Multiplying Fractions & Mixed Numbers

\* Do not have to have a Common denominator

P	* <u>Problem</u> _____ (Write the problem out)
C	* <u>Convert</u> _____ (Convert any Mixed # to Improper #)
M	* <u>Multiply</u> _____ (Multiply straight across) (Numerator X Numerator) (Denominator x Denominator)
S	* <u>Simplify</u> _____ (divide and go around the clock) (Change improper fraction to mixed #)

Please Change My Schedule

Example #1: \_\_\_\_\_

P	$1\frac{1}{2} \times 2\frac{3}{4}$
C	$\overset{3}{\cancel{1}}\frac{1}{2} = \frac{3}{2}$ $\overset{3}{\cancel{2}}\frac{3}{4} = \frac{10}{4}$
M	$\frac{3}{2} \times \frac{10}{4} = \frac{30}{8}$
S	$8 \overline{)30} \begin{array}{r} 3 \\ -24 \\ \hline 6 \end{array}$ $3\frac{6}{8} \div 2 = 3\frac{3}{4}$

Example #2: \_\_\_\_\_

P	$2\frac{1}{2} \times 1\frac{1}{3}$
C	$\overset{4}{\cancel{2}}\frac{1}{2} = \frac{5}{2}$ $\overset{3}{\cancel{1}}\frac{1}{3} = \frac{4}{3}$
M	$\frac{5}{2} \times \frac{4}{3} = \frac{20}{6}$
S	$6 \overline{)20} \begin{array}{r} 3 \\ -18 \\ \hline 2 \end{array}$ $3\frac{2}{6} \div 2 = 3\frac{1}{3}$

Example #3: \_\_\_\_\_

P	$\frac{1}{5} \times \frac{3}{4}$
C	$\frac{1}{5} \times \frac{3}{4}$ (if there is no mixed #, it cannot be converted)
M	$\frac{1}{5} \times \frac{3}{4} = \frac{3}{20}$
S	$\frac{3}{20}$ → cannot be simplified