# CSI: MA THEMATICS Curriculum Support Information 

## A mathematics resource for parents, teachers, and students

## Further investigations:

Find common and decimal fractions in newspapers or magazines. Discuss their meanings with your child.
Find objects in the pantry and ask your child to convert the weight in metric units to fractions (example: 4.32 grams $=432 / 100$ grams).

Discuss with your child what "Batting 1,000" means. Convert baseball averages to decimal and common fractions.

Double the size of a recipe of your child's favorite dish after your child calculates the appropriate amount of the fractional ingredients.

## Terminology:

Numerator: The number above the bar in a fraction. It signifies the indicated part of a whole or a set.

Common fraction: A fraction that is expressed with a horizontal bar or a slash. Example: $\frac{2}{5}$ or $2 / 5$.
Denominator: the number below the bar in a fraction.

Decimal: A number that uses place value and a decimal point to show tenths, hundredths, and so forth

Decimal Fraction: A fraction that is expressed with a decimal point. The denominators of decimal fractions are multiples of 10.

Mixed Number: A number named by a whole number and a fraction
Improper fraction: A fraction with a numerator that is greater than or equal to the denominator

Proper fraction: A fraction with a numerator that is less than the denominator

## Book'em:

Dad's Diet by Barbara Comber
Alexander, Who Used To Be Rich Last
Sunday by Judith Viorst
The Doorbell Rang by Hutchins
Gator Pie by Louise Mathews

## Clues:

A decimal fraction is a fraction where the denominator is a power of ten.
HOWEVER, it is written as a decimal. For example: common fractions $8 / 10,833 / 100$, $83 / 1000$, and $8 / 10000$ are expressed as: $0.8,8.33,0.083$, and 0.0008 as decimal fractions.

## Fractions and Decimals

## Students will:

Fourth Grade 5 of 6

- Read fractional numbers and decimal fractions aloud
- Illustrate or model common and decimal fractions
- Add and subtract fractions with like denominators
- Add, subtract, multiply, and divide one- and two-digit decimal fractions
- Convert mixed numbers to improper fractions and improper fractions to mixed numbers
- Compare fractions and express their relationship using the symbols >, <, or =
- Compare decimals and express their relationship using the symbols >, <, or =


## Classroom Cases:

1. Read the following fractional and decimal numbers aloud:
a. $\frac{4}{9}-$
b. $\frac{3}{4}$
c. $\frac{8}{9}$
d. $4 \frac{5}{6}$
e. $\frac{7}{10}$
f. 0.45
g. 1.02
h. 43.89
i. 3.91
j. 0.5

## Case Closed - Evidence:

| a. four-ninths | b. three-fourths | c. eight-ninths | d. four and five-sixths |
| :--- | :--- | :--- | :--- |
| e. seven-tenths | f. forty-five hundredths | g. one and two hundredths |  |
| h. forty-three and eighty-nine hundredths | i. three and ninety-one hundredths |  |  |
| j. five-tenths |  |  |  |

2. Create pictures to show the common fractions in example 1.

3. Add or subtract the following fractions with like denominators:
a. $\frac{2}{5}+\frac{1}{5}$
b. $\frac{5}{6}-\frac{2}{6}$
c. $3 \frac{1}{8}+2 \frac{5}{8}$
d. $2 \frac{10}{12}-1 \frac{4}{12}$

Case Closed - Evidence:
a. $\frac{3}{5}$
b. $\frac{3}{6}$
c. $5 \frac{6}{8}$
d. $1 \frac{6}{12}$
4. Compare the following pairs of fractions by using the symbols, $>,<$, or $=$.
a. $\frac{5}{6} \bigcirc \frac{2}{6}$
b. $\frac{4}{8} \circ \frac{1}{2} \quad$ c. $\frac{2}{3} \circ \frac{5}{6}$
d. $\frac{2}{12} \circ \frac{3}{5}$ e.
e. 1.020
$1 \frac{1}{10}$ f. $1.03 \bigcirc 0.98$
g. $5.55 \bigcirc 5 \frac{55}{100}$

Case Closed - Evidence:
a. > b. =
C. <
d. <
e. <
f. $>\quad$ g. $=$

