Chapter 5 section 5
Fractions and Decimals

Change a fraction to a decimal
Reduce then divide.

Terminating Decimal
Reduce to lowest terms.
Denominator – prime factorization consist of twos and/or fives
Divide and there is no remainder
The division process stops.

Change $\frac{15}{48}$ to a decimal.

$\frac{3 \cdot 5}{3 \cdot 16}$

$\frac{5}{16}$

$16\overline{)5.00}$

Try: $3\frac{7}{20}$

Repeating decimals.
Reduce to lowest terms
Denominator – prime factorization does not consist of only twos and/or fives
The division process never stops.

Change $\frac{1}{12}$ to a decimal

$12\overline{)1.00}$

Digits are repeated.
The bar should be above as few digits as possible.

Expressions that contain both decimals and fractions.

Express the fractions a decimals as long as it is not a repeating decimal.
Sometimes change the decimal to a fraction, depending on the denominator.

Example:

$-\frac{3}{8} - 1.25$

Change to a fraction.

$-\frac{3}{8} - \frac{5}{4}$

Change to a decimal

-0.375 – 1.25

Example:

$-\frac{2}{3} + 0.35$

Hint:
When a problem contains both decimals and fractions and the fraction represents a repeating decimal, then it would be best to change all numbers to fractions and simplify.