Pre-Algebra
Homework 3: Fractions II. Solutions

Prob. 1

Everything is a proper fraction except: $\frac{5}{-1}$ and $\frac{2}{0}$.

Prob. 2:

The greatest common factors are given by:

a. 6 and 10; GCF 2
b.20 and 28; GCF 4
c. 7 and 13; GCF 1
d. 44 and 34; GCF 2
e. -12 and -42; GCF 6

Prob. 3

In lowest terms the answers are:

a. $\frac{6}{10} = \frac{3}{5}$
b. $\frac{20}{28} = \frac{5}{7}$
c. $\frac{7}{13} = \frac{7}{13}$
d. $\frac{44}{34} = \frac{22}{17}$
e. $\frac{-12}{-42} = \frac{-2}{-7} = \frac{2}{7}$

Prob. 4

In lowest terms, the fractions are:
a. $\frac{16}{6} = \frac{8}{3} = 2\frac{2}{3}$
b. $\frac{23}{13} = 1\frac{10}{13}$
c. $\frac{-27}{18} = \frac{-3}{2} = -1\frac{1}{2}$
d. $\frac{32}{-12} = \frac{8}{-3} = -2\frac{2}{3}$
e. $\frac{-12}{-4} = \frac{-3}{-1} = 3$

Prob. 5
a. I; $\frac{14}{7} = 2$
b. M, L; $2\frac{2}{3} = \frac{8}{3}$
c. M; $-4\frac{2}{4} = \frac{-18}{4} = \frac{-9}{2}$

Prob. 6
a. $\frac{45}{60} = \frac{3}{4}$
b. $\frac{3}{24} = \frac{1}{8}$
c. $\frac{30}{365} = \frac{6}{73}$

d. $\frac{35}{100} = \frac{7}{20}$
e. $\frac{100}{3} = 33\frac{1}{3}$ cents.

Prob. 7
a. $\frac{6}{60} = \frac{1}{10}$
b. $\frac{-15}{60} = -\frac{1}{4}$
c. $10\frac{25}{60} = 10\frac{5}{12}$
d. $-24 + 1\frac{32}{60} = -22\frac{7}{15}$

Prob. 8
a. The LCD is 99 so: $\frac{4}{9} = \frac{44}{99}$ and $\frac{5}{11} = \frac{45}{99}$. Therefore, $\frac{5}{11}$ is larger.
b. The LCD is 189 so: $\frac{-11}{27} = \frac{-77}{189}$ and $\frac{-3}{7} = \frac{-81}{189}$. Therefore, $\frac{-11}{27}$ is larger.

Prob. 9
a. There are many acceptable answers. One answer is $\frac{89}{198}$.
b. There are many acceptable answers. One answer is $\frac{-79}{189}$.
c. There are many acceptable answers. One answer is $\frac{3142}{1000} = 3\frac{142}{1000} = 3\frac{71}{500}$

Prob. 10

If we let x equal the amount that Linda eats, then Jane eats 2x. Therefore $2x + x = 1$. The solution to this is $3x = 1$ which implies that $x = \frac{1}{3}$. Therefore, Linda eats 1/3 of the apple while Jane eats 2/3 of the apple. Jim wants to eat more than Linda but less than Jane so he could eat an apple amount between $\frac{2}{6}$ and $\frac{4}{6}$. Thus Jim could eat $\frac{3}{6} = \frac{1}{2}$ of the apple.