MAT033 Pre-Algebra Worksheet 2

Part a: Fractions I

1. What fraction of an hour are each of the following? Express your answers in lowest terms, and as mixed numbers when appropriate.
(a) 30 minutes
(b) 150 minutes
(c) 1 hour and 51 minutes

2. What fraction of a dollar are each of the coins: the dollar coin, the quarter, the dime, the nickel and the cent?

3. Convert the following mixed numbers to fractions in lowest terms.
(a) $1\frac{2}{3}$
(b) $5\frac{5}{8}$
(c) $-4\frac{4}{6}$

4. Put the following fractions in lowest terms.
(a) $\dfrac{16}{18}$
(b) $\dfrac{2}{3}$
(c) $\dfrac{51}{99}$
(d) $\dfrac{11}{121}$

5. Fred's rent is \$600 per month, and his paycheck is \$1500 per month. What fraction of his paycheck goes to rent? Express your answer as a fraction in lowest terms.

6. You can compare two fractions and find which has the greater value if they are both expressed over the same denominator. In the following pairs of fractions, identify which one is greater:
(a) $\dfrac{3}{5}$ and $\dfrac{4}{5}$
(b) $-\dfrac{3}{5}$ and $\dfrac{4}{5}$

(c) $-\frac{3}{5}$ and $-\frac{4}{5}$

7. Arnold eats $\frac{3}{7}$ of a cake and Bob eats $\frac{2}{5}$ of a cake.
(a) Who ate more cake?
(b) Find an amount of cake that is in between the amounts that Arnold and Bob ate.

Part b: Adding & subtracting fractions

1. Calculate the following (and express your answers in their lowest terms):
   (a) $\frac{4}{15} + \frac{2}{15}$
   (b) $\frac{1}{17} + \frac{7}{17} + \frac{9}{17}$
   (c) $\frac{1}{41} + \frac{5}{41} + \frac{16}{41} - \frac{14}{41}$
   (d) $\frac{1}{99} + \frac{5}{99} + \frac{7}{99} + \frac{2}{99}$

2. Calculate the following (and express your answers in their lowest terms):
   (a) $\frac{4}{15} + \frac{3}{20}$
   (b) $\frac{3}{5} - \frac{7}{9} + \frac{4}{15}$
   (c) $\frac{2}{3} - \frac{1}{6}$
   (d) $1 - \frac{7}{8}$

3. Calculate the following (and express your answers in their lowest terms):
   (a) $1\frac{1}{2} + \frac{3}{4}$
   (b) $4\frac{2}{3} - 3\frac{1}{2}$

(c) $4\frac{3}{4} + 8\frac{2}{3}$

(d) $5\frac{2}{3} + 3\frac{1}{2} - 4\frac{1}{4}$