## *Simplifying Fractions*

1. Simplify each by adding or subtracting as indicated. Leave answers as proper or improper fractions and reduce to lowest terms.

   a) $\frac{1}{4} + \left(-2\frac{1}{6}\right)$

   b) $\frac{5}{7} - \frac{5}{6}$

   c) $\left(-3\frac{1}{8}\right) + \left(-\frac{3}{4}\right)$

   d) $(-3) - \frac{15}{8}$

   e) $3\frac{3}{4} - \frac{3}{8}$

   f) $\left(-\frac{5}{8}\right) - \left(-\frac{7}{8}\right)$

   g) $(-2) + \left(-\frac{3}{4}\right) + \frac{1}{3}$

   h) $\left(-\frac{3}{2}\right) + \frac{3}{5} - \frac{6}{7}$

   i) $\left(-3\frac{1}{8}\right) + \left(-2\frac{1}{8}\right) - (-1)$

   j) $\left(-1\frac{1}{3}\right) + 1\frac{7}{8} - \left(-2\frac{1}{6}\right) - \frac{1}{2}$

   k) $2\frac{7}{8} + 4\frac{7}{8} - \left(-\frac{2}{7}\right) - \frac{5}{8}$

2. Simplify each by multiplying as indicated. Leave answers as mixed fractions when possible and reduce others to lowest terms.

   a) $1\frac{3}{5} \times \left(-\frac{13}{10}\right)$

   b) $\left(-1\frac{1}{10}\right) \times \left(-\frac{1}{2}\right)$

   c) $\left(-3\frac{5}{6}\right) \times \frac{1}{2}$

   d) $2\frac{3}{4} \times \frac{6}{7}$

   e) $\left(4\frac{1}{2}\right)\left(-\frac{4}{3}\right)\left(-\frac{4}{5}\right)$

f) $\left(3\frac{1}{8}\right)\left(\frac{6}{5}\right)\left(-\frac{7}{6}\right)$

g) $\left(-3\frac{1}{5}\right)\left(-1\frac{5}{6}\right)\left(-\frac{7}{5}\right)$

h) $3\frac{3}{4} \bullet \left(-3\frac{2}{3}\right) \bullet 1\frac{1}{2} \bullet (-2)$

i) $\left(-2\frac{3}{5}\right) \bullet (-2) \bullet \left(-\frac{1}{2}\right) \bullet \frac{4}{5}$

j) $2\frac{2}{3} \bullet \left(-3\frac{3}{4}\right) \bullet 3\frac{5}{6} \bullet \frac{1}{3}$

3. Simplify each by dividing as indicated. Leave answers as proper or improper fractions and reduce to lowest terms.

a) $\frac{8}{5} \div \left(-3\frac{3}{4}\right)$

b) $\left(-\frac{1}{3}\right) \div \left(-\frac{1}{10}\right)$

c) $2 \div \left(-1\frac{5}{6}\right)$

d) $\left(-\frac{7}{5}\right) \div 6\frac{1}{2}$

e) $4\frac{1}{2} \div \frac{13}{14}$

f) $\left(-\frac{17}{12}\right) \div \left(-2\frac{2}{3}\right)$

g) $\dfrac{\frac{13}{10}}{2}$

4. Bruce builds garden boxes using two by ten cedar planks. Each box requires $8\frac{2}{5}$ two by ten cedar planks. If he was able to purchase 100 planks on sale, how many boxes could he build?

5. Ross was given $36 by his parents for his three meals when he went on a day trip with his basketball team? He spent on $\frac{1}{3}$ breakfast, $\frac{1}{4}$ on lunch, and $\frac{2}{5}$ on dinner. What percent of the total did he spend on the three meals? How much money did he have left over?

***Answers***

1a) $-\frac{23}{12}$ 1b) $-\frac{5}{42}$ 1c) $-\frac{31}{8}$ 1d) $-\frac{39}{8}$

1e) $\frac{27}{8}$ 1f) $\frac{1}{4}$ 1g) $-\frac{29}{12}$ 1h) $-\frac{123}{70}$

1i) $-\frac{17}{4}$ 1j) $\frac{53}{24}$ 1k) $\frac{415}{56}$

2a) $-2\frac{2}{25}$ 2b) $\frac{11}{20}$ 2c) $-1\frac{11}{12}$ 2d) $2\frac{5}{14}$

2e) $4\frac{4}{5}$ 2f) $-4\frac{3}{8}$ 2g) $-8\frac{16}{75}$ 2h) $41\frac{1}{4}$

2i) $-2\frac{2}{25}$ 2j) $-12\frac{7}{9}$

3a) $-\frac{32}{75}$ 3b) $\frac{10}{3}$ 3c) $-\frac{12}{11}$ 3d) $-\frac{14}{65}$

3e) $\frac{63}{13}$ 3f) $\frac{17}{32}$ 3g) $\frac{13}{20}$

4a) 11 boxes

5a) $\frac{59}{60}$

5a) \$0.60 leftover