

## Session 1.4

## Warm-up problems

1. Divide the following fractions

(a)  $2 \div \frac{1}{6}$

(b)  $\frac{14}{15} \div 7$

(c)  $\frac{1}{3} \div \frac{3}{4}$

(d)  $\frac{5}{6} \div \frac{3}{6}$

(e)  $\frac{4}{11} \div \frac{8}{11}$

(f)  $\frac{9}{10} \div \frac{6}{5}$

2. Convert the following decimals into fractions and simplify them

(a) 0.25

(b) 0.125

(c)  $0.\overline{3}$

(d) 0.6

(e) 0.75

(f)  $0.\overline{6}$

(g)  $0.\overline{1}$

(h)  $0.1\overline{6}$

## Group problems

- Taj has  $\frac{3}{4}$  of his M&M's pack left. If each person must eat  $\frac{1}{8}$  of the M&M's pack, how many people can split it?
- Jose buys 3.75 cups of sugar. If he uses  $\frac{1}{8}$  cups of sugar each morning for coffee, how many days until he runs out?
- Mikee drinks  $\frac{3}{4}$  cups of orange juice each morning. How big does his jug of OJ need to be if he wants it to last 7 days?
- When a plane pilot goes on autopilot, they gets buzzed every  $4\frac{1}{2}$  kilometers to make sure he stays awake. How many times are they buzzed on a journey from Chicago to Des Moines (91.5 kilometers)?
- At an American Red Cross medical tent, a dosage of 3.5 mg of penicillin (antibiotics) must be administered to each patient. If they have 63.7 mg of penicillin in stock, how many patients can they help? If they must be able to help 84 patients each month, how much penicillin should the Red Cross have in stock?
- Four friends go to a meal and split the check for \$52.44. How much does each one pay? Extra: if two friends split a dish, how should the cost be distributed?
- The Food and Drug Association says that humans should not absorb more than 37.5 Joules of microwave energy per month. If making a plate pizza rolls in the microwave dissipates 1.125 Joules of microwave energy, how many plates of pizza rolls can you make each month?
- Reese's cups contain 1.375 grams of saturated fat per cup. If your daily value of saturated fat should not exceed 9.625 grams, how many cups can you have per day? How many "twin packs" (two cups per pack) can you eat per day?