1. Convert. Use your reference sheet to help you remember the conversion factors.

   a. 4.5 km = __4500__ m   d. 8.25 g = __8250__ mg   g. 0.5 mi. = __2640__ ft.

   $$\begin{array}{r} 5280 \\ \times\ 0.5 \\ \hline 2640.0 \end{array}$$

   b. __22__ fl. oz. = 2.75 c   e. 3.25 gal. = __13__ qt.   h. 7.9 m = __790__ cm

   $$\begin{array}{r} 2.75 \\ \times\quad 8 \\ \hline 22.00 \end{array}$$

   $$\begin{array}{r} 3.25 \\ \times\quad 4 \\ \hline 13.00 \end{array}$$

   c. __4850__ mi = 4.85i   f. __33__ pt. = 16.5 qt.   i. __72__ oz. = 4.5 lb.

   $$\begin{array}{r} 16.5 \\ \times\quad 2 \\ \hline 33.0 \end{array}$$

   $$\begin{array}{r} 4.5 \\ \times\ 16 \\ \hline 270 \\ +450 \\ \hline 72.0 \end{array}$$

2. Cassidy figured out that she makes $0.75 every minute at her job. She works 7 hours 15 minutes every day.

   a. How many minutes does she work in 4 days?

   1 day → 7 hrs × 60 = 420 min + 15 min = 435 min

   $$\begin{array}{r} 435 \\ \times\quad 4 \\ \hline 1740\ \text{min} \end{array}$$

   1740 min in 4 days.

   b. How much will Cassidy earn in 4 days?

   60 min × 0.75 = $45 per hour

   $$\begin{array}{r} 0.75 \\ \times\ 60 \\ \hline 45.00 \end{array}$$

   $$\begin{array}{r} \$45 \\ \times\ 7\ \text{hrs} \\ \hline \$315 \end{array}$$

   $$\begin{array}{r} 15\ \text{min} \\ \times 0.75 \\ \hline 75 \\ 1050 \\ \hline \$11.25 \end{array}$$

   $$\begin{array}{r} \$315.00 \\ +\ 11.25 \\ \hline 326.25 \\ \times\qquad 4 \\ \hline 1305.00 \end{array}$$

   Cassidy earns $1305.00 in 4 days.

3. Emma can't believe how huge the Statue of Liberty is. She finds more information about Lady Liberty. Help Emma fill in the rest of the chart and then answer the questions.

The Statue of Liberty's	CUSTOMARY UNITS		METRIC UNITS	
	Feet	Inches	Meters	Centimeters
nose	48 + 6 4 ft 6 in	54 in	1.37 m	137 cm
index finger	8 ft ×12	96 in	2.44 m	244 cm
head	17ft 3 in	207 in	5.26 m	526 cm
eye	2 ft 6 in	30 in	0.76 m	76 cm

Source: http://www.nps.gov/stli/historyculture/statue-statistics.htm

a. Emma is 52 inches tall. Which of Lady Liberty's body parts above is the closest to Emma's height? What is the difference between these two measurements in inches?

The nose is the closest. It is 2 inches longer.

b. Emma's eye is 4 cm wide. How many of Emma's eyes lined up end to end would it take to stretch all the way across one of Lady Liberty's eyes?

$$4\overline{)76}$$
19.
-4
36

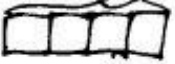It would take 19 of Emma's eyes to stretch across Lady Liberty's eye.

c. The length of Emma's neighborhood block is 0.19 km. About how many of the statue's heads would it take to cover the length of her block?

38
$$5\overline{)190}$$
-15
40
-40
0

0.19m = 190m

5.26 ≈ 5

About 38 heads would be needed to cover the block.

d. Measured in meters, Lady Liberty's index finger is 4 times as long as Emma's leg. What is the length of Emma's leg in meters? 2.44m

LL's finger ▭▭▭▭
E's leg ▭
?

2.44 ÷ 4 = 0.61

Emma's leg is 0.61m long.