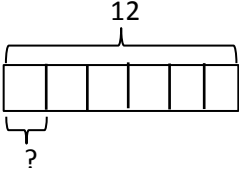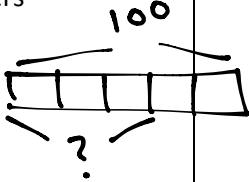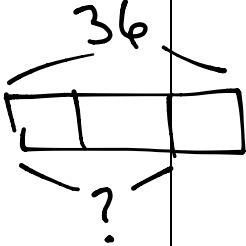Name _____    Date _____
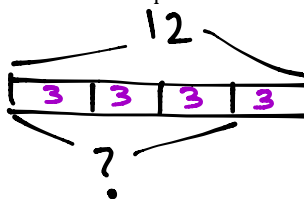
1. Convert.  Show your work using a tape diagram or an equation.  The first one is done for you.

| | |
|---|---|
| a. $\frac{1}{4}$ yard = __9__ inches <br><br> $\frac{1}{4}$ yd $= \frac{1}{4} \times 1$ yard <br><br> $\quad = \frac{1}{4} \times 36$ inches <br><br> $\quad = \frac{36}{4}$ inches <br><br> $\quad = 9$ inches | b. $\frac{1}{6}$ foot = __2__ inches <br><br> $\frac{1}{6}$ foot $= \frac{1}{6} \times 1$ foot <br><br> $\quad = \frac{1}{6} \times 12$ inches <br><br> $\quad = \frac{12}{6}$ in <br><br> $\quad = 2$ in |
| c. $\frac{3}{4}$ year = __9__ months <br><br> $\frac{3}{4}$ year $= \frac{3}{4} \times 12$ months <br><br> $\quad = \frac{36}{4}$ months <br><br> $\quad = 9$ months | d. $\frac{3}{5}$ meter = __60__ centimeters <br><br> $\frac{3}{5}$ m $= \frac{3}{5} \times 100$ cm <br><br> $\quad = \frac{3 \times 100^{20}}{5} $ cm <br><br> $\quad = \frac{60}{1}$ cm <br><br> $\quad = 60$ cm |
| e. $\frac{5}{12}$ hour = __25__ minutes <br><br> $\frac{5}{12}$ hr $= \frac{5}{12} \times 60$ min <br><br> $\quad = \frac{5 \times 60^5}{12}$ min <br><br> $\quad = 25$ min | f. $\frac{2}{3}$ yard = __24__ inches <br><br> $\frac{2}{3}$ yd $= \frac{2}{3} \times 36$ in <br><br> $\quad = \frac{2 \times 36^{12}}{3}$ in <br><br> $\quad = 24$ in |

2. Michelle measured the length of her forearm.  It was $\frac{3}{4}$ of a foot.  How long is her forearm in inches?

$\frac{3}{4}$ ft $=$ __9__ inches

3.  At the market, Ms. Winn bought $\frac{3}{4}$ lb of grapes and $\frac{5}{8}$ lb of cherries.

a.  How many ounces of grapes did Ms. Winn buy?

$\frac{3}{4}$ lb = $\underline{12}$ ounces

$\frac{3}{4}$ lb = $\frac{3}{4}$ × 16 oz

$= \frac{3 \times \overset{4}{\cancel{16}}}{\cancel{4}\,1}$ oz

$= 12$ oz

$\frac{5}{8}$ lb = $\frac{5}{8}$ × 16 ounces

b.  How many ounces of cherries did Ms. Winn buy?

$\frac{5}{8}$ lb = $\underline{10}$ ounces

$= \frac{5 \times \overset{2}{\cancel{16}}}{1\,\cancel{8}}$ oz

$= 10$ oz

c.  How many more ounces of grapes than cherries did Ms. Winn buy?

$12 - 10 = 2$

2 ounces more of grapes

d.  If Mr. Phillips bought $1\frac{3}{4}$ pounds of raspberries, who bought more fruit, Ms. Winn or Mr. Phillips? How many ounces more?
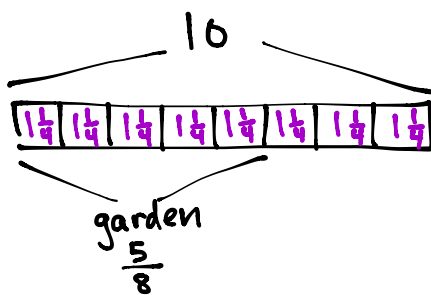
Ms W: $12 + 10 = 22$ ounces

$\frac{3}{4}$ lb = $\underline{12}$ ounces

Mr P: $16 + 12 = 28$ ounces

Mr P bought 6 ounces more.

4.  A gardener has 10 pounds of soil.  He used $\frac{5}{8}$ of the soil for his garden.  How many pounds of soil did he use in the garden?  How many pounds did he have left?



1 unit = $10 \div 8 = \frac{10}{8} = 1\frac{2}{8} = 1\frac{1}{4}$

garden: $5 \times 1\frac{1}{4} = 1\frac{1}{4} + 1\frac{1}{4} + 1\frac{1}{4} + 1\frac{1}{4} + 1\frac{1}{4}$

$= 5 + \frac{5}{4}$

$= 5 + 1\frac{1}{4}$

$= 6\frac{1}{4}$

$6\frac{1}{4}$ pounds used for garden.
$3\frac{3}{4}$ pounds left over.

left: $3 \times 1\frac{1}{4} = 1\frac{1}{4} + 1\frac{1}{4} + 1\frac{1}{4}$

$= 3 + \frac{3}{4}$

$= 3\frac{3}{4}$

Lesson 9:    Find a fraction of a measurement, and solve word problems.
Date:        11/9/13

engage<sup>ny</sup>    4.C.53