G5-M4-Lesson 20

Convert. Express the answer as a mixed number.

1. $2\frac{2}{3}$ ft = ____ in

1 foot = 12 inches

$$2\frac{2}{3}\text{ ft} = 2\frac{2}{3} \times 1\text{ ft}$$
$$= 2\frac{2}{3} \times 12\text{ in}$$
$$= \frac{8}{3} \times 12\text{ in}$$
$$= \frac{96}{3}\text{ in}$$
$$= 32\text{ in}$$

I rename $2\frac{2}{3}$ as a fraction greater than 1, or an improper fraction, $\frac{8}{3}$. Then, I multiply.

2. $2\frac{7}{10}$ hr = _____ min

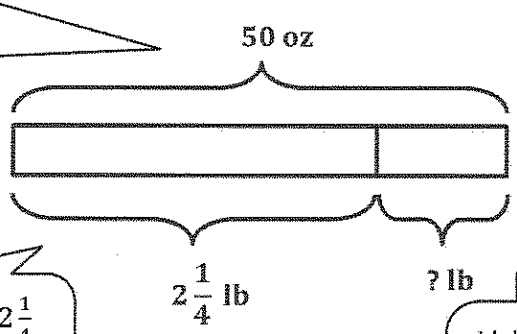
1 hour = 60 minutes

$$2\frac{7}{10}\text{ hr} = 2\frac{7}{10} \times 1\text{ hr}$$
$$= 2\frac{7}{10} \times 60\text{ min}$$
$$= (2 \times 60\text{ min}) + \left(\frac{7}{10} \times 60\text{ min}\right)$$
$$= (120\text{ min}) + (42\text{ min})$$
$$= 162\text{ min}$$

I can use the distributive property. I multiply 2×60 minutes and add that to the product of $\frac{7}{10} \times 60$ minutes.

3. Charlie buys $2\frac{1}{4}$ pounds of apples for a pie. He needs 50 ounces of apples for the pie. How many more pounds of apples does he need to buy?

I draw a whole tape diagram showing the total of 50 ounces of apples that Charlie needs for the pie.



I draw and label a part $2\frac{1}{4}$ pounds to show the apples Charlie bought.

I label the remaining part that Charlie needs with a question mark, to represent what I'm trying to find out.

$2\frac{1}{4}$ lb = _____ oz

$2\frac{1}{4}$ lb $= 2\frac{1}{4} \times 16$ oz

$= \frac{9}{\cancel{4}_{1}} \times \cancel{16}^{4}$ oz

$= 36$ oz

I convert $2\frac{1}{4}$ pounds to ounces by multiplying by 16. $2\frac{1}{4}$ pounds is equal to 36 ounces.

$$\begin{array}{rccc} & \cancel{5}^{4} & \cancel{0}^{10} & \\ & \cancel{5} & \cancel{0} & \text{oz} \\ - & 3 & 6 & \text{oz} \\ \hline & 1 & 4 & \text{oz} \end{array}$$

I subtract 36 ounces from the total of 50 ounces to find how many more ounces of apples Charlie needs to buy. The difference is 14 ounces.

14 oz = _____ lb

14 oz $= 14 \times 1$ oz

$= 14 \times \frac{1}{16}$ lb

$= \frac{14}{16}$ lb

$= \frac{7}{8}$ lb

Since the question asks how many more ***pounds*** does he need to buy, I convert 14 ounces to pounds.

Charlie needs to buy $\frac{7}{8}$ pound of apples.