6. Tess makes hair bows to sell at the craft fair. Each bow requires 2.5 yards of ribbon.

a) At the fabric store, ribbon is sold by the foot. If Tess wants to make 12 bows, how many feet of ribbon must she buy? Show all your work.

STEP 1: How many yards does each bow need? __2.5__

STEP 2: How many feet are in a yard? __3__

STEP 3: How many feet does each bow need?

$$2.5y = 2.5 \times (1y)$$
$$= 2.5 \times (3ft)$$
$$= 7.5 ft$$

STEP 4: How many feet do 12 bows need?

7.5 feet × 12 bows

$$\begin{array}{r} 75 \text{ tenths} \\ \times 12 \\ \hline 150 \\ + 750 \\ \hline 900 \end{array} \text{ tenths} = 90 \text{ feet}$$

12 bows need
90 feet of ribbon

b) If the ribbon costs 10¢ per foot, what is the total cost of the ribbon in dollars? <u>Explain your reasoning</u>, including how you decided where to place the decimal.

STEP 1: How much does one foot of ribbon cost? __10 cents__

STEP 2: How many feet of ribbon did she buy? __90 feet__

STEP 3: How much did the ribbon cost?

10 cents × 90 = 900 cents
900 cents = $9.00