Tom wants to buy 2.5 pounds of chocolate that sells at ¼ pound costs $1.39. This is a rate problem, so I'll use a proportion. But first, I'll draw pictures.

 ← 1 pound of chocolate divided into quarters

$1.39

There are 10 quarter pounds (#'d 1-10)

10 portions @ $1.39 → $13.90 cost for Tom.
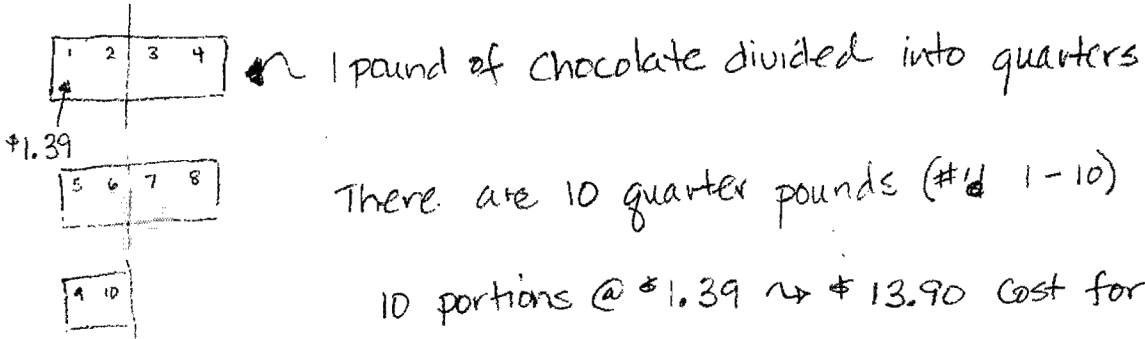
$$\frac{1}{4} = 0.25$$
$$2\frac{1}{2} = 2.5$$

$$\frac{0.25}{1.39} = \frac{2.5}{x}$$

$$\frac{0.25x}{0.25} = \frac{3.475}{0.25}$$

$$x = 13.9$$
$$x = \$13.90$$

First, I converted the fractions all to decimals, then I wrote the ratio $\dfrac{\text{pounds of chocolate}}{\text{amount of money}}$ $\dfrac{0.25}{1.39} = \dfrac{2.5}{x}$ x is unknown money

Cross multiply: $0.25x = 3.475$, simplify by dividing by 0.25

I usually use proportions to solve rate problems, like "I can do 50 pushups in 2 minutes. How many can I do in 4 minutes. $\frac{50}{2} \times \frac{x}{4}$ $\frac{2x}{2} = \frac{200}{2}$ $x = 100$ pushups

To check, I can use addition — I know 4 quarters are in 1 pound

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 1$$
$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 1$$
$$\frac{1}{4} + \frac{1}{4} = 0.5$$

2.5 pounds he wants to buy

It takes 10 ¼'s to make 2.5. So, since ¼ pounds of chocolate is $1.39, multiply that by 10 → $13.90

It will cost Tom $13.90 to buy the gift for his Mom.

1