G3-M2-Lesson 21

Mia measures the lengths of three pieces of wire. The lengths of the wires are recorded to the right.

Wire A	63 cm ≈ 60 cm
Wire B	75 cm ≈ 80 cm
Wire C	49 cm ≈ 50 cm

a. Estimate the total length of Wire A and Wire C. Then, find the actual total length.

I can round the lengths of all the wires to the nearest ten.

Estimate: $60 \text{ cm} + 50 \text{ cm} = 110 \text{ cm}$

I can add the rounded lengths of Wires A and C to find an estimate of their total length.

Actual: $63 \text{ cm} + 49 \text{ cm} = 112 \text{ cm}$

62 1 50

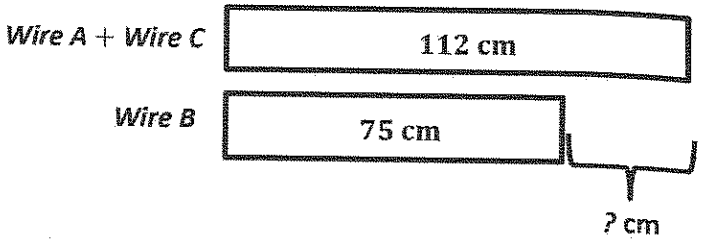
I can use mental math to solve this problem. I do not have to write it out vertically. I can break apart 63 as 62 and 1. Then I can make the next ten to 50, and then add the 62.

The total length is 112 cm.

b. Subtract to estimate the difference between the total length of Wires A and C and the length of Wire B. Then, find the actual difference. Model the problem with a tape diagram.

Estimate: $110 \text{ cm} - 80 \text{ cm} = 30 \text{ cm}$

Actual: $112 \text{ cm} - 75 \text{ cm} = 37 \text{ cm}$



From the tape diagram, I see that I need to solve for an unknown part.

$$\begin{array}{r} {}^{10}\,{}^{12} \\ \not{1}\not{2}\text{ cm} \\ -\ 75 \text{ cm} \\ \hline 37 \text{ cm} \end{array}$$

The difference is 37 cm.

I can write this problem vertically. I can unbundle 1 ten for 10 ones. I can rename 112 as 10 tens and 12 ones. Then I am ready to subtract.

EUREKA MATH