

# Equivalent Lengths (Kilometres and Metres)

1a. Joe is completing the bar model below.

3 km and 600 m		
3 km	m	m

He says,



The missing values are 250 m and 400 m.

Is he correct?  
Convince me.

R

1b. Hannah is completing the bar model below.

7 km	1 km	50 m

She says,

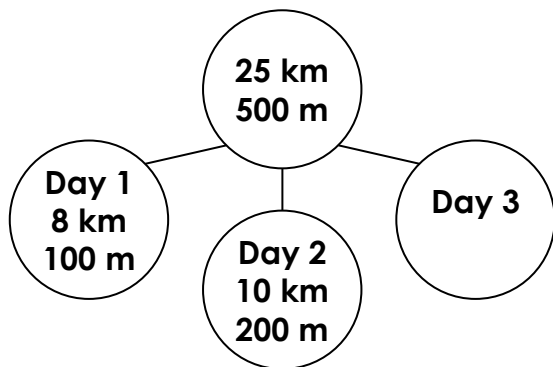


The missing value is 8 km and 500 m.

Is she correct?  
Convince me.

R

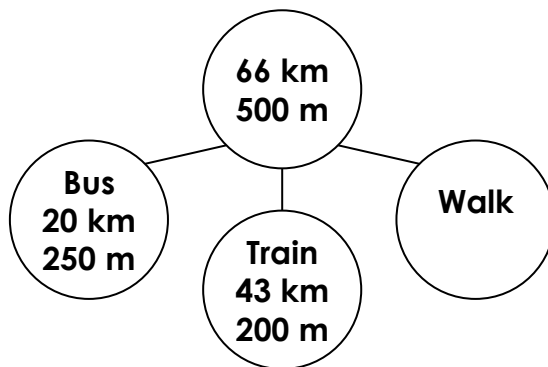
2a. Jemma has been training for a marathon. This week, she ran a total of 25 km 500 m. On day 1 she ran 8 km 100 m, on day 2 she ran 10 km 200 m.



How far did Jemma run on day 3?

PS

2b. Elliot is going to visit his sister. The journey is 66 km 500 m. The bus journey is 20 km 250 m, the train journey is 43 km 200 m and then he walks to her house.



How far does Elliot have to walk?

PS

3a. Here is an incomplete part-whole model. Use the information below to work out what the missing measurements could be.

The total number of km and m is greater than 3 km and 400 m but less than 3 km 900 m.

km and m		
3 km	100 m	m

Find three possibilities.

PS

3b. Here is an incomplete part-whole model. Use the information below to work out what the missing measurements could be.

The total number of km and m is less than 8 km and 700 m but more than 8 km and 150 m.

km and m		
8 km	50 m	m

Find three possibilities.

PS

## Equivalent Lengths (Kilometres and Metres)

- 1a. Joe is incorrect. Although the 3 km is correct, the total number of kilometres and metres is 3 km and 600 m.  $250\text{ m} + 400\text{ m}$  is equivalent to 650 m and not 600 m.
- 1b. Hannah is incorrect. She has stated that there are 8 km 500 m when the bar model only shows 50 m. The correct answer would be 8 km and 50 m.
- 2a. On day 3, Jemma ran 7 km and 200 m.  $8\text{ km and }100\text{ m} + 10\text{ km and }200\text{ m} = 18\text{ km and }300\text{ m}$ .  $25\text{ km} - 18\text{ km} = 7\text{ km and }500\text{ m} - 300\text{ m} = 200\text{ m}$ .
- 2b. Elliot walked 3 km and 50 m.  $20\text{ km and }250\text{ m} + 43\text{ km and }200\text{ m} = 63\text{ km and }450\text{ m}$ .  $66 - 63\text{ km} = 3\text{ km and }500\text{ m} - 450\text{ m} = 50\text{ m}$ .
- 3a. Various answers, for example:  $3\text{ km} + 100\text{ m} + 400\text{ m} = 3\text{ km and }500\text{ m}$ ;  $3\text{ km} + 100\text{ m} + 350\text{ m} = 3\text{ km and }450\text{ m}$ ;  $3\text{ km} + 100\text{ m} + 600\text{ m} = 3\text{ km and }700\text{ m}$
- 3b. Various answers, for example:  $8\text{ km} + 50\text{ m} + 350\text{ m} = 8\text{ km and }400\text{ m}$ ;  $8\text{ km} + 50\text{ m} + 500\text{ m} = 8\text{ km and }550\text{ m}$ ;  $8\text{ km} + 50\text{ m} + 450 = 8\text{ km and }500\text{ m}$