

# Adding lengths

## Discover



- I** a) Kate and Ebo join the three pieces of bunting together to make one piece. How long is the new piece?
- b) If Kate and Ebo had joined the 3 m piece to the 450 cm piece, what total length would they have?

## share

- a) Once converted, add the metres and centimetres separately.

First the metres:

$$4 \text{ m} + 3 \text{ m} = 7 \text{ m}$$

Then the centimetres:

$$25 \text{ cm} + 50 \text{ cm} = 75 \text{ cm}$$

Then add the total metres and centimetres together.

$$7 \text{ m} + 75 \text{ cm} = 7 \text{ m } 75 \text{ cm}$$

I will start by converting 450 cm to 4 m 50 cm.



I would change all the lengths to centimetres and then add them up.

H	T	O	
2	5		
4	5	0	
+ 3	0	0	
7	7	5	cm

The new piece of bunting is 7 m 75 cm.

I wonder if both these methods give the same answer.



- b) One piece is 3 m.

450 cm is the same as 4 m 50 cm.

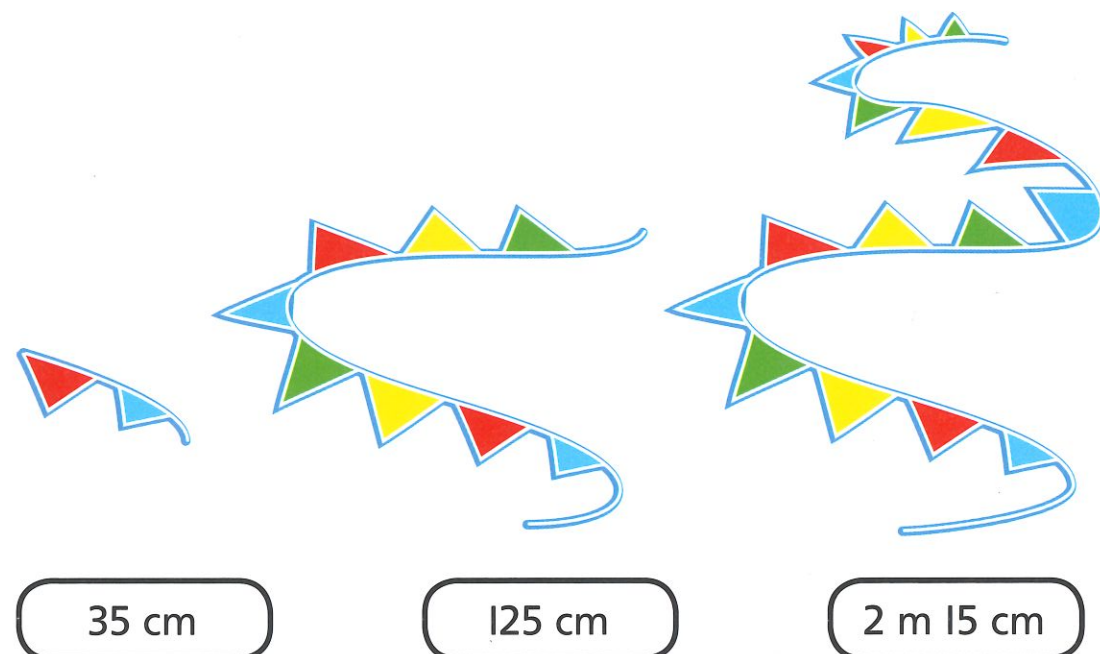
Kate and Ebo would have a total length of 7 m 50 cm (or 750 cm).





## Think together

- 1 Use both Flo's method and Dexter's method to find the total length of these three pieces of bunting. Check that both methods give the same answer.



- 2 These three pieces will be joined together to make a plastic model. Use both Flo and Dexter's methods to work out the total height of the model.



- 3 Work out the missing numbers.

a)  $50 \text{ cm} + 50 \text{ cm} = \boxed{\phantom{00}} \text{ m}$

b)  $4 \text{ cm} + 60 \text{ mm} = \boxed{\phantom{00}} \text{ cm}$

c)  $12 \text{ mm} + \boxed{\phantom{00}} \text{ mm} = 2 \text{ cm}$

d)  $1 \text{ m } 40 \text{ cm} + \boxed{\phantom{00}} \text{ cm} = 3 \text{ m}$

- 4 There are 3 pieces of wool. What lengths can you make by joining different combinations of the pieces together?

Which is the best way of doing the calculations?

1 m 85 cm

50 cm

60 cm



I am adding something on to 1 m 85 cm, so I will first add until I make 2 m and then add on whatever is left.

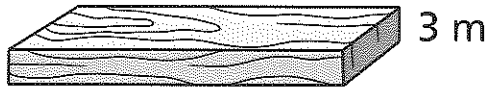
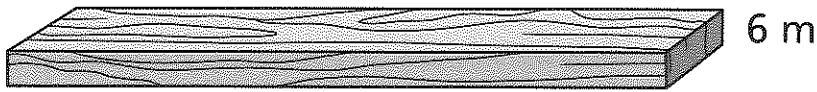
I think it is quicker to convert everything into centimetres and then add them together.



# Adding lengths

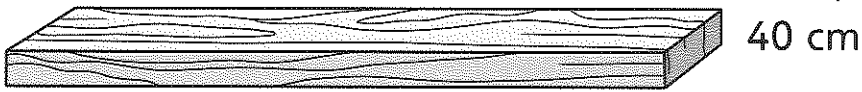
- 1 A carpenter joins two pieces of wood together. What is the total length?

a)



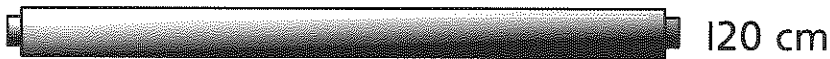
$$6 \text{ m} + 3 \text{ m} = \boxed{\phantom{00}} \text{ m}$$

b)



$$40 \text{ cm} + 20 \text{ cm} = \boxed{\phantom{00}} \text{ cm}$$

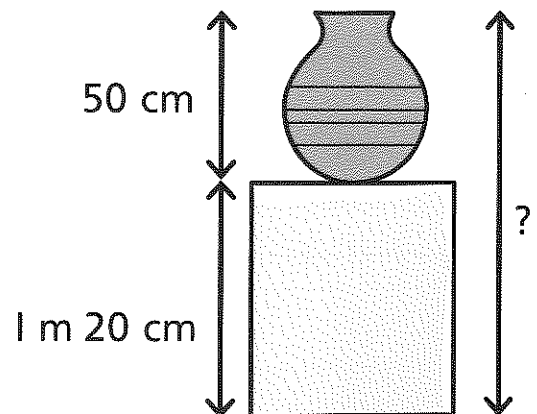
- 2 A plumber joins pieces of pipe together. What is the total length?



$$120 \text{ cm} + 65 \text{ cm} = \underline{\hspace{2cm}}$$

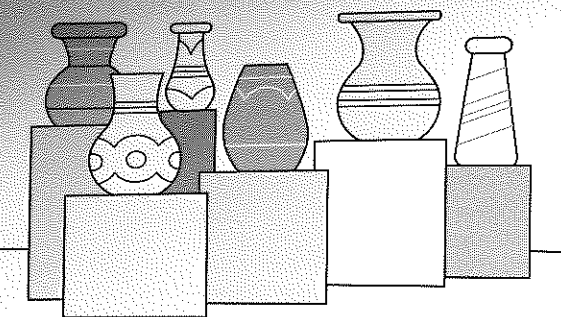
- 3 A shop makes a display by putting a vase on a stand. What is the total height of the display?

The total height is                     .





- 4 The shop has more displays of vases and stands. Complete the table.



Display	Stand Height	Vase Height	Total Height
A	40 cm	30 cm	
B	80 cm	30 cm	
C	1 m 20 cm	60 cm	
D	1 m 30 cm	70 cm	

- 5 Complete the number sentences.

a)  $75 \text{ cm} + 25 \text{ cm} = \boxed{\phantom{00}} \text{ m}$

c)  $6 \text{ cm} + 70 \text{ mm} = \boxed{\phantom{00}} \text{ cm}$

b)  $27 \text{ mm} + \boxed{\phantom{00}} \text{ mm} = 3 \text{ cm}$

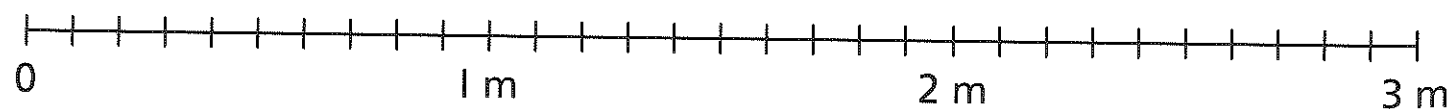
d)  $2 \text{ m } 25 \text{ cm} + \boxed{\phantom{00}} \text{ cm} = 3 \text{ m}$

- 6 Jamilla and Andy took part in the final of a hop, skip and jump competition.

Jamilla hopped 80 cm, skipped 70 cm and jumped 1 m 20 cm.

Andy hopped 70 cm, skipped 1 m 10 cm and jumped 1 m.

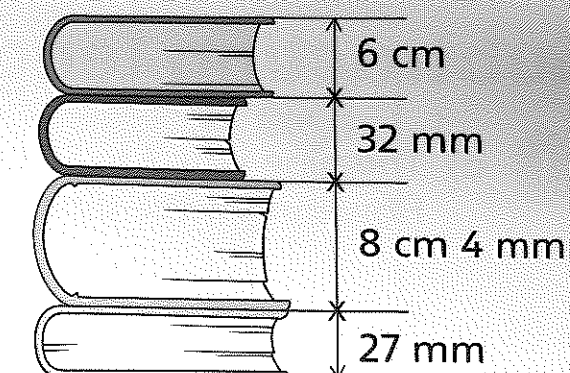
Who won the competition?



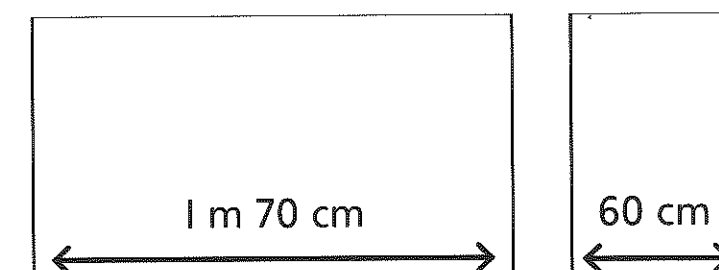
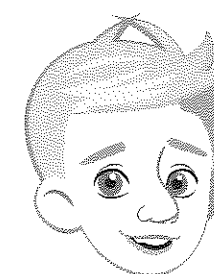
\_\_\_\_\_ won.

- 7 These four books are stacked on top of each other. What is the total height of the stack of books?

The total height of the stack of books is \_\_\_\_\_.



- 8 Mrs Dean asked Zac to work out the total length of two display boards.



When I add 60 cm to 1 m 70 cm, I get 1 m 130 cm.

Do you agree with Zac? Explain. \_\_\_\_\_

## Reflect

Richard knits a scarf that is 1 m 80 cm long. He knits another 30 cm. How long is the scarf now? Explain your steps.

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

