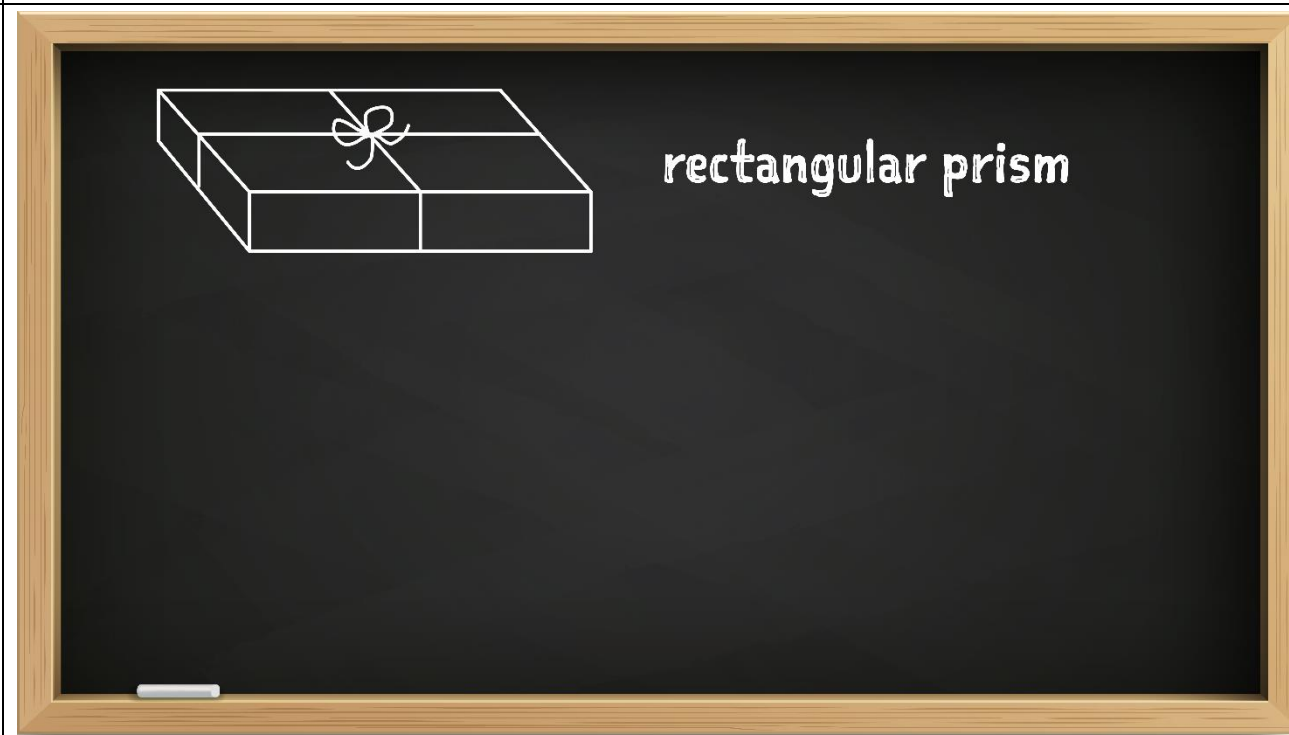


## Maths in Action: Solution to Problem 1

### *Transcript*

This is the box of books from the question. Do you remember the name for this shape? It's a rectangular prism.

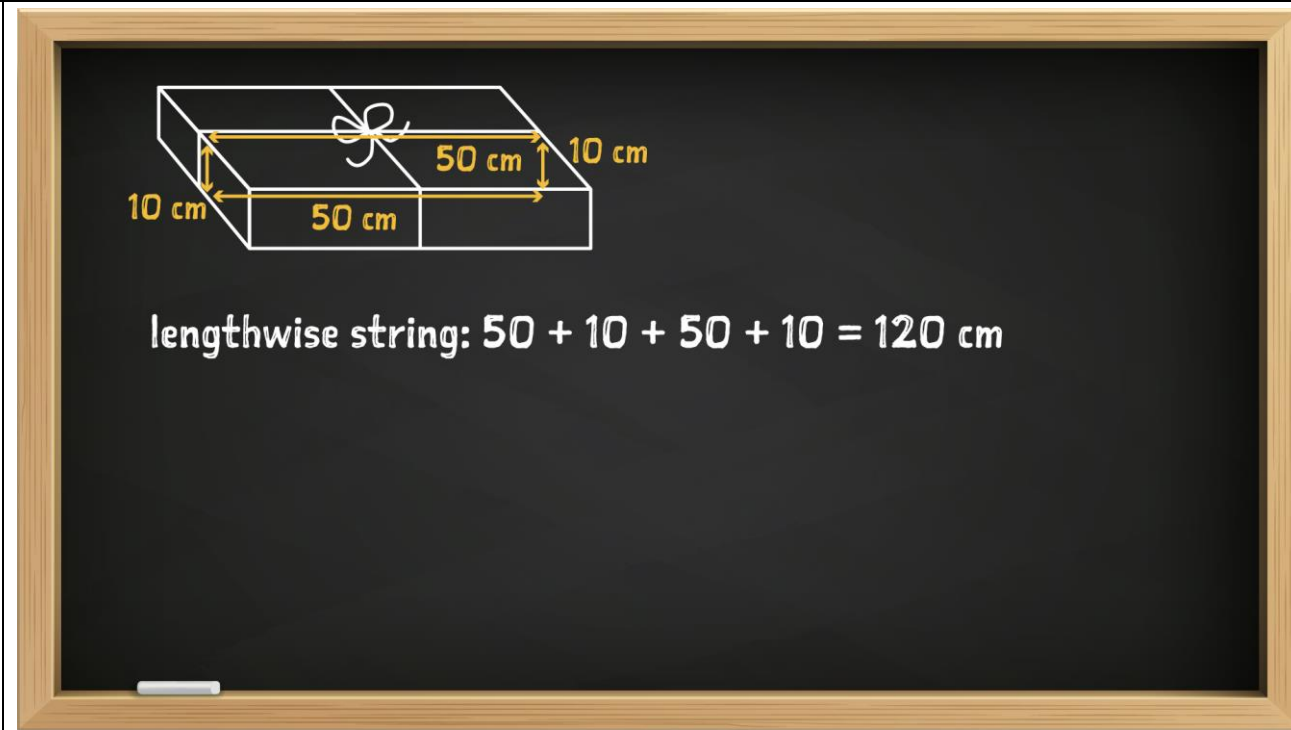
### *Working*



*Transcript*

To solve this problem, we can add up the string needed around the box lengthwise, which is: fifty centimetres plus ten centimetres plus fifty centimetres plus ten centimetres again, which equals a hundred and twenty centimetres.

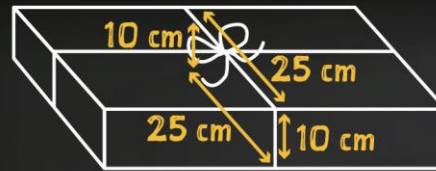
*Working*



*Transcript*

Then we add up the string needed around the box widthwise which is: twenty-five centimetres plus ten centimetres plus again twenty-five centimetres and ten centimetres, which equals seventy centimetres.

*Working*



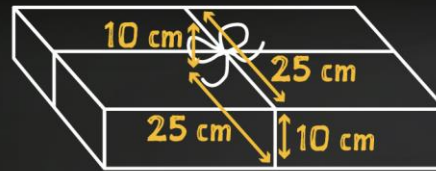
$$\text{lengthwise string: } 50 + 10 + 50 + 10 = 120 \text{ cm}$$

$$\text{widthwise string: } 25 + 10 + 25 + 10 = 70 \text{ cm}$$

*Transcript*

Then we add up the string needed around the box widthwise which is: twenty-five centimetres plus ten centimetres plus again twenty-five centimetres and ten centimetres, which equals seventy centimetres.

*Working*



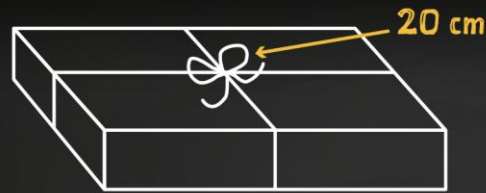
$$\text{lengthwise string: } 50 + 10 + 50 + 10 = 120 \text{ cm}$$

$$\text{widthwise string: } 25 + 10 + 25 + 10 = 70 \text{ cm}$$

*Transcript*

Allowing twenty centimetres for the bow, the calculation for the length of the string needed is:

*Working*



$$\text{lengthwise string: } 50 + 10 + 50 + 10 = 120 \text{ cm}$$

$$\text{widthwise string: } 25 + 10 + 25 + 10 = 70 \text{ cm}$$

$$\text{bow string} = 20 \text{ cm}$$

*Transcript*

...a hundred and twenty centimetres plus seventy centimetres plus twenty centimetres, which equals two-hundred and ten centimetres.

*Working*



$$\text{lengthwise string: } 50 + 10 + 50 + 10 = 120 \text{ cm}$$

$$\text{widthwise string: } 25 + 10 + 25 + 10 = 70 \text{ cm}$$

$$\text{bow string} = 20 \text{ cm}$$

$$\text{total string: } 120 \text{ cm} + 70 \text{ cm} + 20 \text{ cm} = \boxed{210 \text{ cm}}$$