

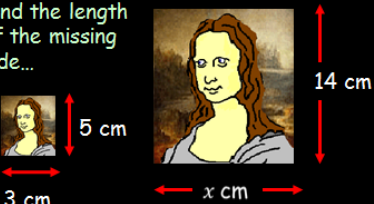
Outcome 1 - Similar lengths

Bronze example

Examples... Calculate Linear S.F.

These 2 paintings are mathematically similar.

Find the length of the missing side...



Linear S.F. = $\frac{\text{big}}{\text{wee}} = \frac{14}{5}$

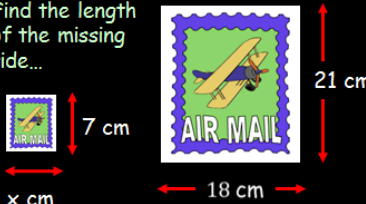
$x = \frac{14}{5} \times 3 = 8.4 \text{ cm}$

Silver example

Examples... Calculate Linear S.F.

These 2 stamps are mathematically similar.

Find the length of the missing side...



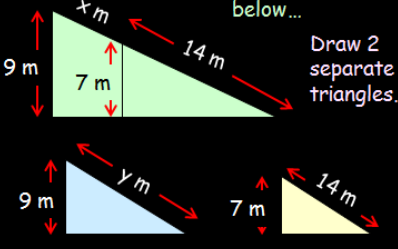
Linear S.F. = $\frac{\text{wee}}{\text{big}} = \frac{7}{21} = \frac{1}{3}$

$x = \frac{1}{3} \times 18 = 6 \text{ cm}$

Gold example

Examples... Calculate the missing length below...

Draw 2 separate triangles...



Find the missing side...

Linear S.F. = $\frac{9}{7}$

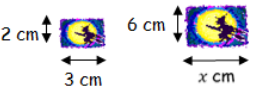
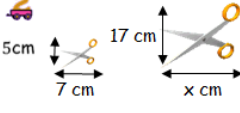
$y = \frac{9}{7} \times 14 = 18 \text{ m}$

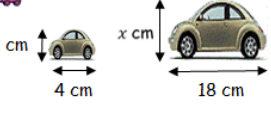
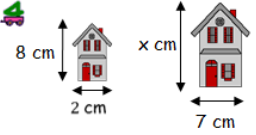
Answer question...

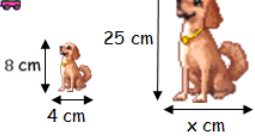
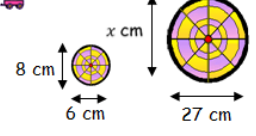
$x = 18 - 14 = 4 \text{ m}$

Bronze Questions

The following shapes are mathematically similar. Calculate the length of the missing sides...

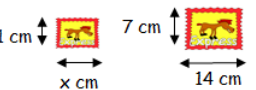
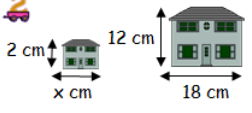
1.  2. 

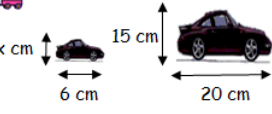
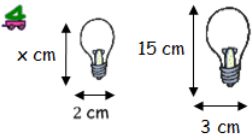
3.  4. 

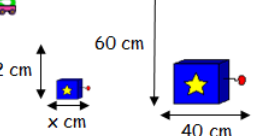
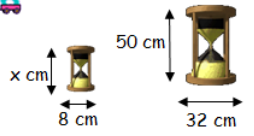
5.  6. 

Silver Questions

The following shapes are mathematically similar. Calculate the length of the missing sides...

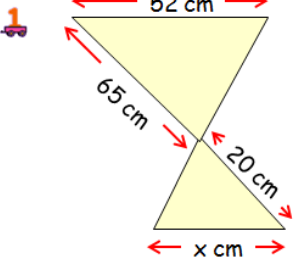
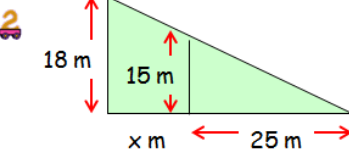
1.  2. 

3.  4. 

5.  6. 

Gold Questions

The following shapes are mathematically similar. Calculate the length of the missing sides...

1.  2. 

Bronze Answers

- | | | | |
|----|---------|----|---------|
| 1. | 9 cm | 2. | 23·8 cm |
| 3. | 9 cm | 4. | 28 cm |
| 5. | 12·5 cm | 6. | 36 cm |

Silver Answers

- | | | | |
|----|--------|----|---------|
| 1. | 2 cm | 2. | 3 cm |
| 3. | 4·5 cm | 4. | 10 cm |
| 5. | 8 cm | 6. | 12·5 cm |

Gold Answers

1. 16 cm
2. $30 - 25 = 5$ m