

7.1 & 7.2 Scale Diagrams: Enlargements & Reductions

June 2, 2015 11:44 AM

Scale diagram.

- a diagram that is an enlargement or reduction of another diagram

Scale factor

- the relationship between the matching lengths on the two diagrams
- a reduction has a scale factor less than 1

$$\text{Scale factor} = \frac{\text{length on scale diagram}^{\text{drawing length}}}{\text{length on original diagram}^{\text{actual length}}}$$

Ex #1

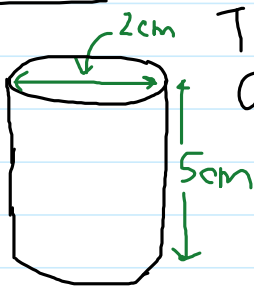
Here is a scale diagram of a fly
The actual length is 13mm
The scale diagram is 39mm



Find the scale factor

$$\text{scale factor} = \frac{\text{diagram}}{\text{actual}} = \frac{39\text{mm}}{13\text{mm}} = \boxed{3}$$

Ex #2



This cylinder is to be enlarged by a scale factor of 2.5
find the dimensions of the enlargement?

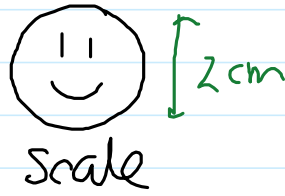
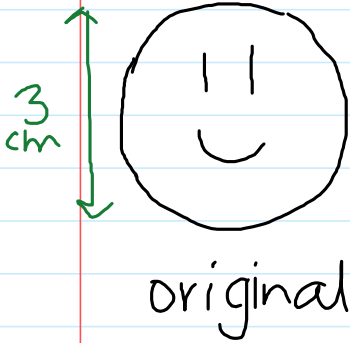
diameter

$$2 \times 2.5 = \boxed{5\text{cm}}$$

height

$$5 \times 2.5 = \boxed{12.5\text{cm}}$$

Ex #3



$$\frac{\text{height on scale diagram}}{\text{height on original}} = \boxed{\frac{2}{3}}$$

pg 323 # 4-9

pg 329 # 4-9, 11