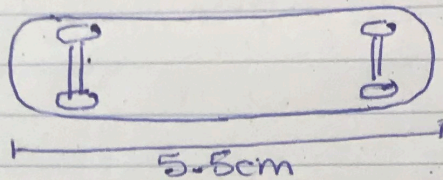


4.2 Scale Diagrams

Ex 1: Using a Scale to Determine Actual Length
 The scale Diagram of a skateboard uses a scale of 1:14. What is the actual length?

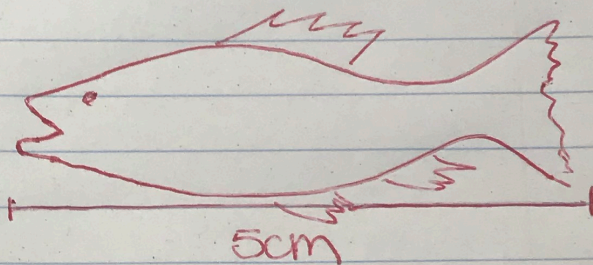


1:14 means for every 1 cm on the diagram, there are 14 cm on the actual skateboard.

$$\text{Diagram} \times \text{S.F.} = \text{Actual}$$

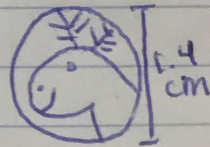
$$5.5 \text{ cm} \times 14 = 77 \text{ cm}$$

SYK: Scale \rightarrow 1:9.2
 Actual \rightarrow ?



Ex 2: Determine Scale Factor

A quarter has a diameter of 23.88 mm. Calculate the scale factor used to create the diagram.



Kilo	top # = diagram	\Rightarrow	$\frac{14 \text{ mm}}{23.88 \text{ mm}}$	$=$	$\frac{1 \text{ mm}}{1.71 \text{ mm}}$
Hecto	bottom # = actual				

$\xrightarrow{\div 14}$ (from 14 mm to 1 mm)
 $\xrightarrow{\div 1.71}$ (from 23.88 mm to 1.71 mm)

Deci
 Centi $\rightarrow \times 10$
 Milli

Scale Ratio \Rightarrow 1:1.71

Scale Factor \Rightarrow 1.71

$\uparrow = \downarrow \times$

SYK: The flying distance from Dawson City to Whitehorse is 540 km. On a map, this distance is shown as 3 cm. What is the scale ratio?

