

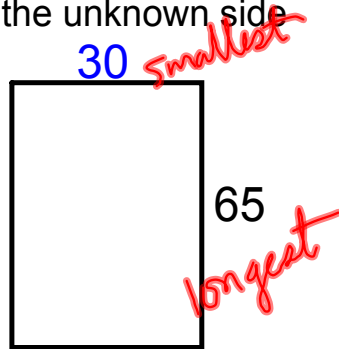
WARM-UP

A. Find the scale factor.

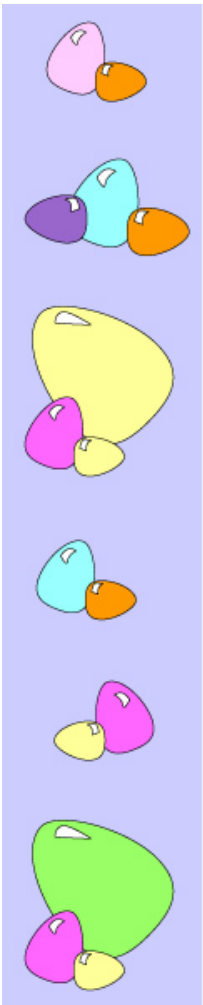
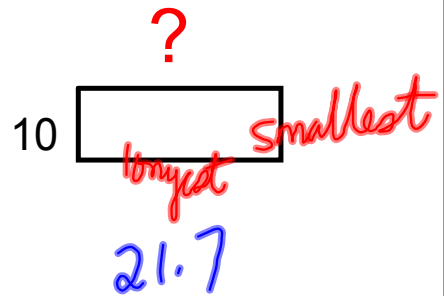
$$\frac{\text{reduction}}{\text{original}} = \frac{10}{30} = \frac{1}{3}$$

$0.\dot{3}$

B. Find the unknown side



$$65 \times \frac{1}{3} = \frac{65}{3}$$



4. Write each fraction in simplest form, then express it as a decimal.

a) $\frac{25}{1000}$

b) $\frac{5}{125}$

c) $\frac{2}{1000}$

d) $\frac{3}{180}$

0.025

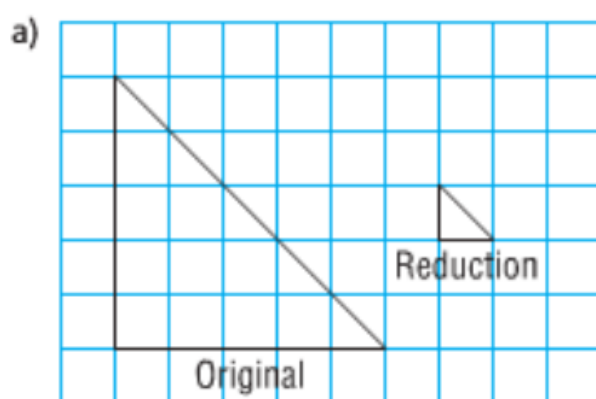
0.04

0.002

0.017

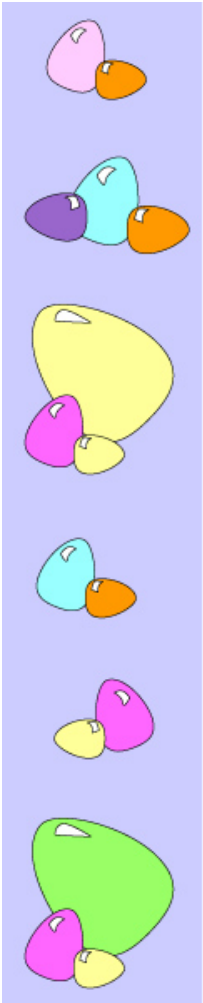


5. Determine the scale factor for each reduction as a fraction or a decimal.

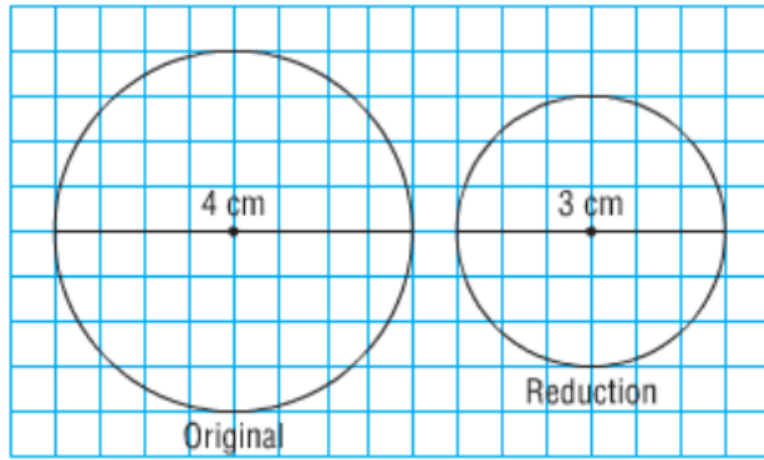


$$\frac{\text{reduction}}{\text{original}} = \frac{1}{5} = 0.2$$





b)



$$\frac{3}{4} = 0.75$$

6. For each pair of circles, the original diameter and the diameter of the reduction are given. Determine each scale factor as a fraction or a decimal.

	Diameter of Actual Circle	Diameter of Reduction
a)	50 cm	30 cm
b)	30 cm	20 cm
c)	126 cm	34 cm
d)	5 m	2 cm
e)	4 km	300 m

Handwritten calculations for scale factors:

- a) 0.6
- b) 0.7
- c) 0.27
- d) $\frac{2}{500} = 0.004$
- e) $\frac{300}{4000} = 0.075$

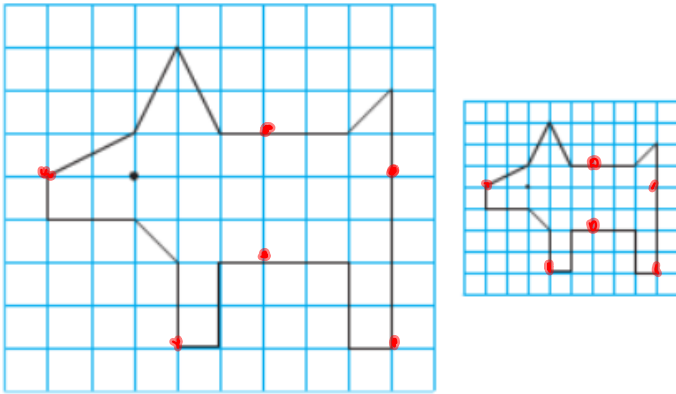


Handwritten conversion notes:

- $1\text{ m} = 100\text{ cm}$
- $1000\text{ m} = 1\text{ km}$

Apply

7. Here are two drawings of a dog. Determine the scale factor of the reduction as a fraction and as a decimal.



$$\frac{\text{reduction}}{\text{original}} = \frac{2}{4} = 0.5$$

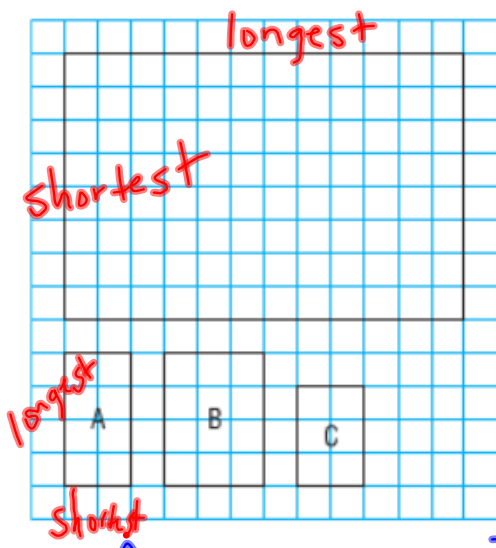
$$\frac{1.3}{2.5} = 0.52$$

$$\frac{0.75}{1.5} = 0.5 \quad \frac{0.7}{1.5} = 0.47$$





8. Which of rectangles A, B, and C is a reduction of the large rectangle? Justify your answer.



Shape A

$$\frac{\text{reduction } L}{\text{original } L} = \frac{4}{12} \quad \frac{R.S.}{O.S.} = \frac{2}{8}$$

$$\frac{1}{3} \leftrightarrow \frac{1}{4}$$

~~X~~

Shape B

$$\frac{\text{reduction } L}{\text{original } L} = \frac{4}{12} = \frac{1}{3} \quad \frac{r.s.}{o.s.} = \frac{3}{8}$$

~~X~~

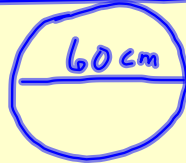
Shape C

$$\frac{3}{12} = \frac{1}{4} \quad \frac{2}{8} = \frac{1}{4} \quad \checkmark$$

A reduction of each object is to be drawn. Determine the corresponding length in cm on the scale diagram.

A. A desk has a length of 75 cm. The scale factor is $\frac{1}{3}$

B. A bicycle has a wheel with diameter of 60 cm. The scale factor is $\frac{3}{50}$



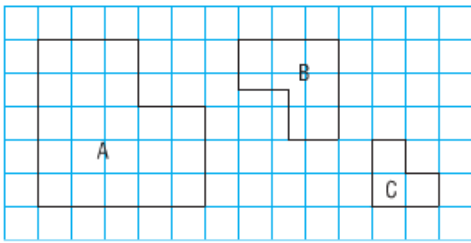
$= 0.06$

C. A surfboard has a length of 200 cm. The scale factor is 0.005

D. A sailboat has length of 8 m. The scale factor is 0.02



10. Which two polygons have pairs of corresponding lengths that are proportional? Identify the scale factor for the reduction.



Assignment