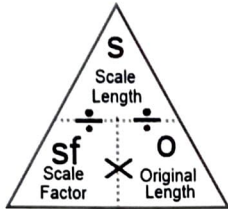


Name: ANSWER KEY



$$S = SF \times O$$

$$O = \frac{S}{SF}$$

$$SF = \frac{S}{O}$$

$$\frac{\quad}{25} = \frac{\quad}{\quad} \%$$

Instructions: Complete the following questions in the space provided. Be sure to show ALL work!

1. A photo has dimensions 12.4 cm by 8.3 cm. The photo is to be enlarged by a scale factor of 4.5. Calculate the dimensions of the enlargement. (2)

Original Dimensions	Scale factor	Enlarged (Scale) Dimensions
Length 12.4cm	\times 4.5	55.8cm
Width 8.3 cm	\times 4.5	37.35cm

2. Determine the scale factor of this enlargement. (3)

$$SF = \frac{S}{O}$$

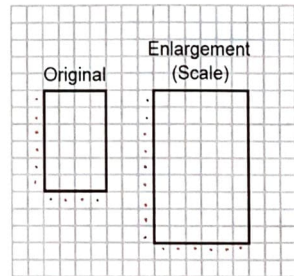
$$= \frac{6}{4} \text{ OR } \text{widths}$$

$$= 1.5$$

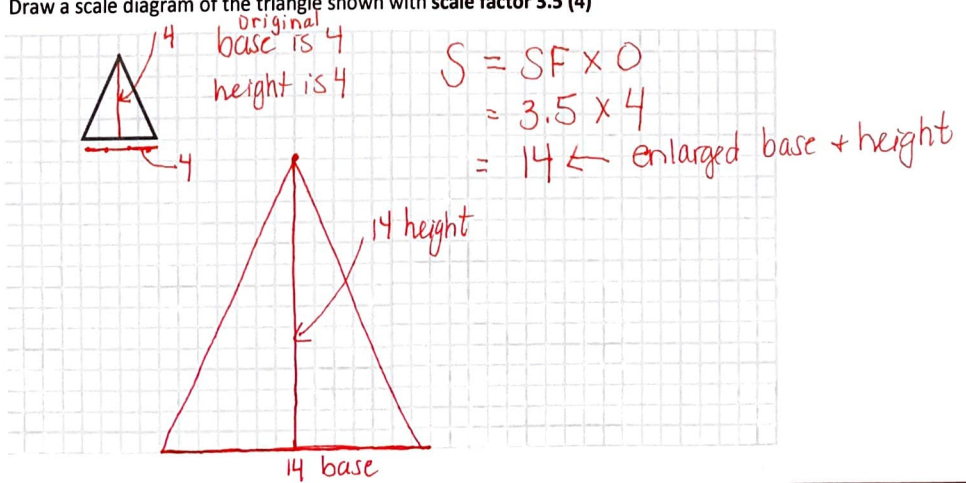
$$SF = \frac{S}{O}$$

$$= \frac{9}{6} \text{ heights}$$

$$= 1.5$$

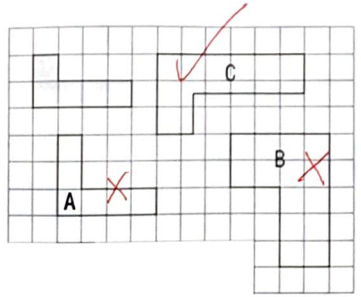


3. Draw a scale diagram of the triangle shown with scale factor 3.5 (4)



4. Which of polygons A, B, and C, are scale diagrams of the shaded polygon? For each scale diagram you identify, state the scale factor. (Each square = 1) (3)

Polygon	It is a scale of the shaded polygon?	If yes, what is the scale factor? (Show work)
A	Yes or <u>No</u>	
B	Yes or <u>No</u>	
C	<u>Yes</u> or No	SF = $\frac{S}{O} = \frac{2}{3} = 0.\bar{6}$



(A) $\frac{2}{3} = \frac{4}{4} \times$ (B) $\frac{2}{4} = \frac{4}{5} \times$

5. Determine the value of y in this proportion. (2)

$\frac{y}{2.5} = \frac{7.5}{1.5}$

$7.5 \times 2.5 \div 1.5 = 12.5$

$y = 12.5$

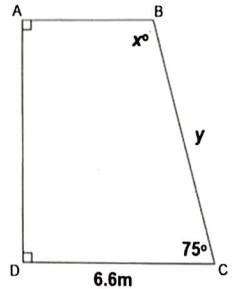
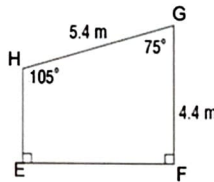
(C) $\frac{2}{3} = \frac{4}{6} = \frac{1}{1.5} = \frac{3}{4.5} = \frac{1}{1.5} = \frac{1}{1.5}$

6. These quadrilaterals are similar.

- a) Identify the corresponding sides and angles. (4)

• $\overline{AB} = \overline{EH}$
 • $\overline{BC} = \overline{HG}$
 • $\overline{CD} = \overline{GF}$
 • $\overline{DA} = \overline{FE}$

• $\angle A = \angle E$
 • $\angle B = \angle H$
 • $\angle C = \angle G$
 • $\angle D = \angle F$



- b) Determine the value of x° . (1)

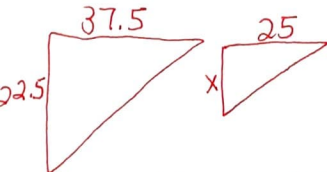
$x^\circ = 105^\circ$

- c) Determine the value of side y. (3)

$\frac{5.4m}{y} = \frac{4.4}{6.6}$ $y = 8.1$

OR $\frac{5.4}{4.4} = \frac{y}{6.6}$ $y = 8.1$

7. This scale diagram shows the measurements of two similar triangles. Calculate the missing length. (3)



$\frac{x}{22.5} = \frac{25}{37.5}$

$x = 15$

OR $\frac{x}{22.5} = \frac{25}{37.5}$

$x = 15$

