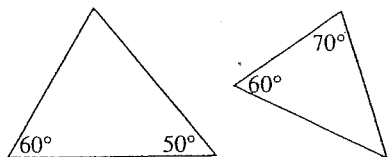


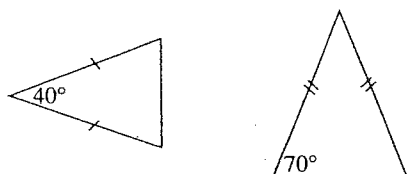
SIMILAR POLYGONS

1. State why the two polygons are or are not similar.

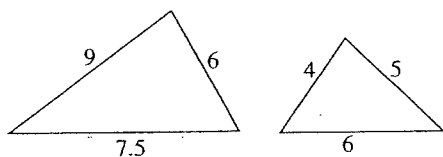
a)



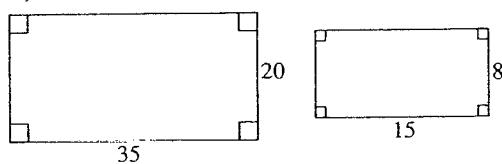
b)



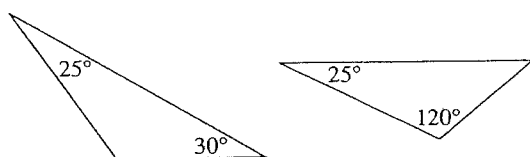
c)



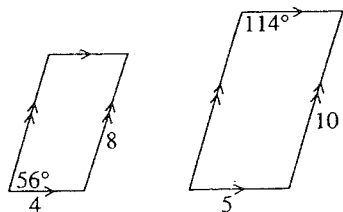
d)



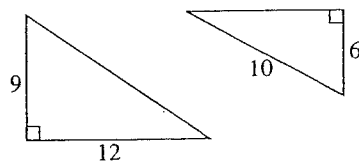
e)



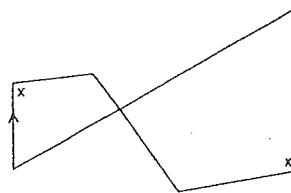
f)



g)



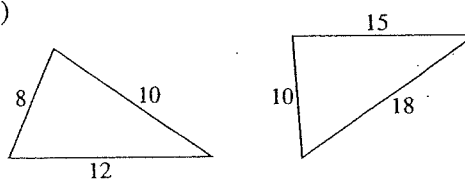
h)



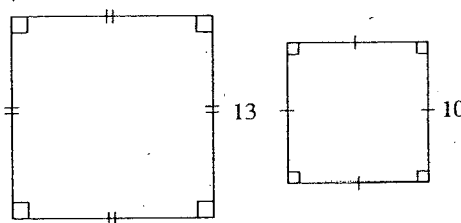
i)



j)

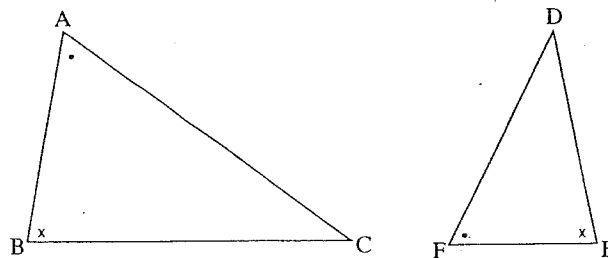


k)



2. Complete each statement for the following pairs of similar figures.

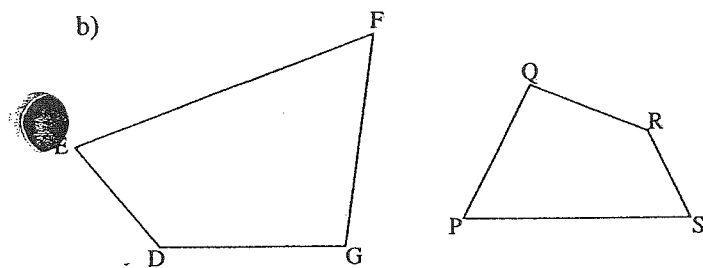
a)



$$\triangle ABC \sim \triangle \underline{\hspace{2cm}}$$

$$\frac{AB}{?} = \frac{BC}{?} = \frac{AC}{?}$$

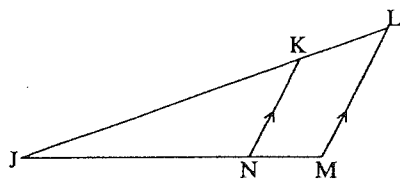
b)



DEFG ~ _____

$$\frac{?}{PQ} = \frac{?}{QR} = \frac{?}{RS} = \frac{?}{PS}$$

c)

 $\triangle JKN \sim \triangle$ _____

$$\frac{JK}{?} = \frac{?}{LM} = \frac{?}{?}$$

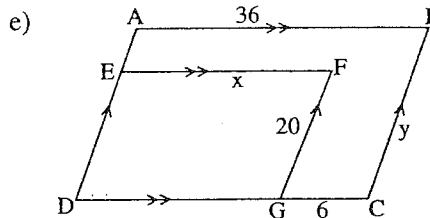
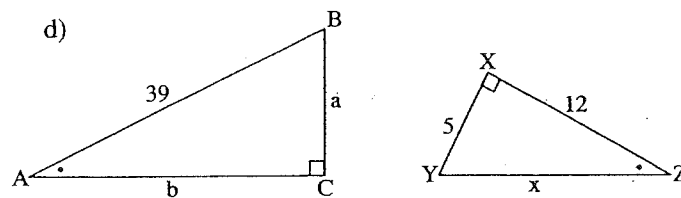
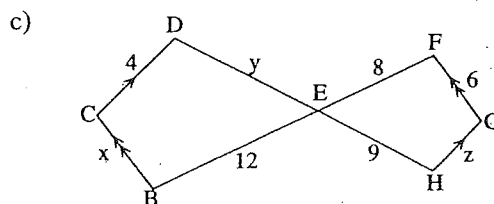
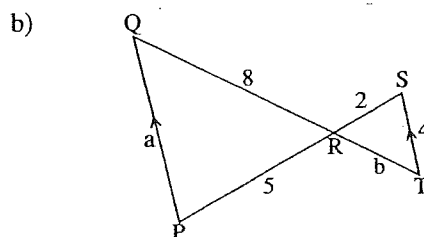
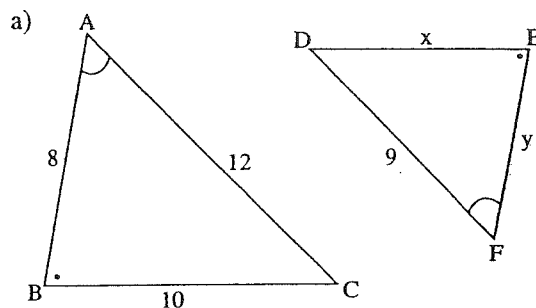
3. Complete the following statement.

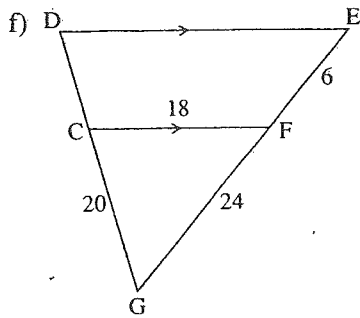
If $\triangle DHG \sim \triangle MPT$, then

$$\frac{?}{PT} = \frac{DG}{?} = \frac{?}{?}$$

4. Use the ratios of the corresponding sides to calculate the unknown lengths in the following similar figures. (All measurements are in cm.)

Work in your notebook.

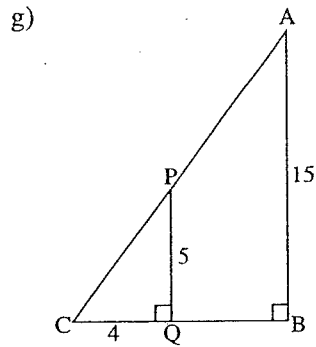




$$DE =$$

$$DG =$$

$$DC =$$

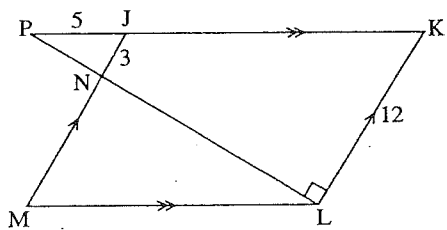


$$CB =$$

$$QB =$$

$$CP =$$

h)



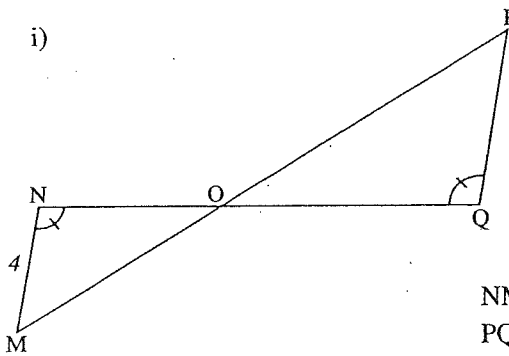
$$JK =$$

$$ML =$$

$$MN =$$

$$NL =$$

i)

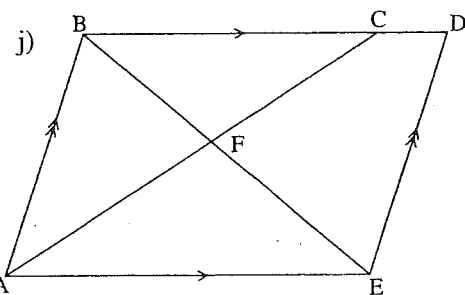


$$NM = 4$$

$$PQ = 6$$

$$NQ = 15$$

$$NO =$$



$$BC = 16$$

$$CD = 4$$

$$BE = 18$$

$$BF =$$

PERIMETER, AREA, AND VOLUME OF SIMILAR FIGURES

Objective: To discover the relationship between the lengths of corresponding sides and the perimeters, areas, and volumes of similar figures.

Complete the following tables. (All units are in cm.)

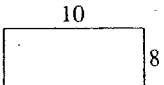
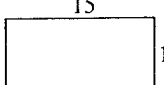
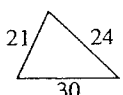
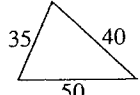
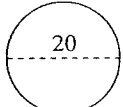

Figure	Perimeter	Similar figure	Perimeter	Ratio of corresponding sides	Ratio of perimeters
	36 cm		54 cm	$\frac{15}{10} = \frac{3}{2}$	$\frac{54}{36} = \text{---}$
					
					

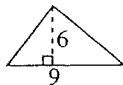
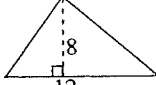
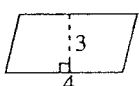
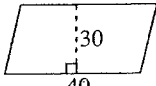
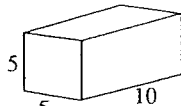
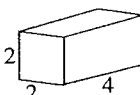
Figure	Area	Similar figure	Area	Ratio of corresponding sides	Ratio of areas
					
					
	surface area		surface area		

Figure	Volume	Similar figure	Volume	Ratio of corresponding sides	Ratio of volumes
