

1. Name the corresponding angles [use 3 letters]

$$\angle \underline{BA}R = \angle \underline{NG}S \quad \angle \underline{AR}B = \angle \underline{GS}N$$

$$\angle \underline{ABR} = \angle \underline{GNS}$$

2. Write the ratio of corresponding sides

$$\frac{AR}{GS} = \frac{RB}{SN} = \frac{BA}{NG}$$

3. Solve for the unknown sides

$$\frac{AR}{2.5} = \frac{6}{1.5} = \frac{8}{NG}$$

side AR

$$\frac{AR}{2.5} = \frac{6}{1.5} \quad (2.5)$$

$$AR = \frac{15}{1.5}$$

$$AR = 10$$

side NG

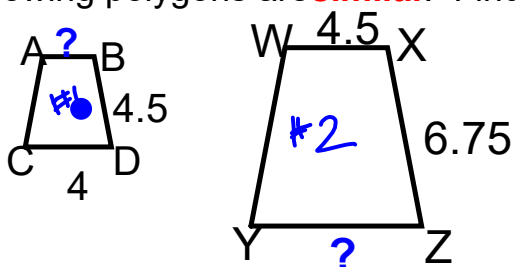
$$\frac{8}{NG} = \frac{6}{1.5}$$

(FIP) $\frac{NG}{8} = \frac{1.5}{6}$ (8)

$$NG = \frac{12}{6}$$

$$NG = 2$$

The following polygons are **similar**. Find the unknown side



Similar means the ratio of corresponding sides **MUST** be equal.

similarity statement $ACDB \sim WYZX$

$$\frac{AB}{WX} = \frac{BC}{XZ} = \frac{CD}{ZY} = \frac{CA}{YW}$$

$$\frac{AB}{4.5} = \frac{4.5}{6.75} = \frac{?}{?} = \frac{CA}{YW}$$

[24]

Line AB

$$\frac{AB}{4.5} = \frac{4.5}{6.75}$$

$$AB = \frac{20.25}{6.75}$$

$$AB = 3$$

Line ZY

$$\frac{4}{2Y} = \frac{4.5}{6.75}$$

$$\frac{4}{2Y} = \frac{6.75}{4.5}$$

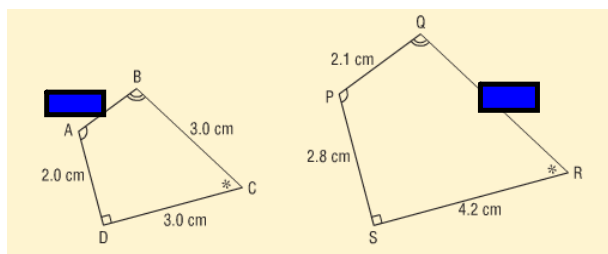
$$2Y = \frac{27}{4.5}$$

$$2Y = 6$$

Given the following similar polygons...

1. Give a similarity statement $ABCD \sim PQRS$

2. Find side QR? Find side AB? **[Write the ratio of corresponding sides First!!!]**



$$\frac{AB}{PQ} = \frac{BC}{QR} = \frac{CD}{RS} = \frac{DA}{SP}$$

$$\frac{AB}{2.1} = \frac{3}{QR} = \frac{3}{4.2} = \frac{2}{2.8}$$

side AB

~~(2.1)~~ $\frac{AB}{2.1} = \frac{3}{4.2}$

$$AB = \frac{6.3}{4.2}$$

$$AB = 1.5$$

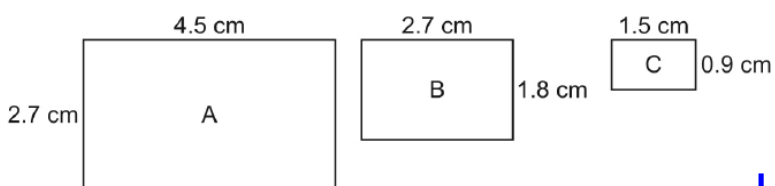
side QR

$$\frac{3}{QR} = \frac{3}{4.2}$$

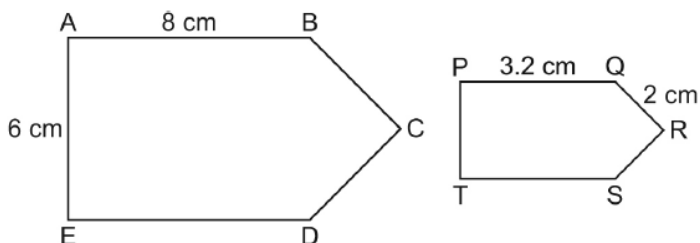
(Fix) $\frac{QR}{3} = \frac{4.2}{3}$

$$QR = 4.2$$

Which rectangles are similar? Give reasons for your answer.



	Long	short
$\frac{A}{B}$	$\frac{4.5}{2.7} = 1.6$	$\frac{2.7}{1.8} = 1.5$ X
$\frac{A}{C}$	$\frac{4.5}{1.5} = 3$	$\frac{2.7}{0.9} = 3$ ✓
$\frac{B}{C}$	$\frac{2.7}{1.5} = 1.8$	$\frac{1.8}{0.9} = 2$ X



a) Similarity statement $ABCDE \sim PQRST$

b) Ratio of corresponding sides $\frac{AB}{PQ} = \frac{BC}{QR} = \frac{CD}{RS} = \frac{DE}{ST} = \frac{AE}{PT}$

c) find side BC [CB]

$$\frac{8}{3.2} = \frac{BC}{2} = \frac{CD}{RS} = \frac{DE}{ST} = \frac{6}{PT}$$

d) find side PT [TP]

Find BC [CB]

$$\frac{BC}{2} = \frac{8}{3.2} \quad (2)$$

$$BC = \frac{16}{3.2}$$

$$BC = 5$$

Find PT [TP]

$$\frac{6}{PT} = \frac{8}{3.2}$$

$$\frac{PT}{6} = \frac{3.2}{8} \quad (6)$$

$$PT = \frac{19.2}{8}$$

$$PT = 2.4$$

Classwork/Homework

Page 341 4, 5, 9 → $\frac{1}{2}$ $\frac{2}{3}$ $\frac{3}{3}$ Long Short

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Worksheet 1-4

DO NOT ON SHEET
Sketch Polygons!!!

#2 sheet

Ratio of corresponding sides | Equal Angles [use 3 letters]

#4. Set up Ratios then solve!!!