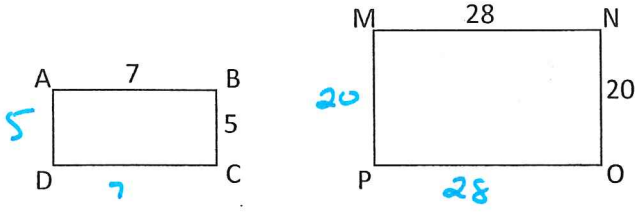


Key

7.5 Similar Figures and Perimeter



1. Find the scale factor of rect ABCD to rect MNOP.

$$\frac{7}{28} = \frac{1}{4} = .25$$

2. Find the perimeter of each rectangle.

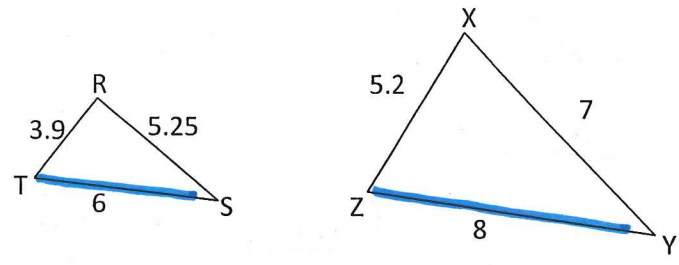
rect ABCD = 24 rect MNOP = 96

3. What is the ratio of the perimeter ABCD to MNOP?

$$\frac{24}{96} = .25 = \frac{1}{4}$$

4. What do you notice about the ratios?

SLR = ratio of Perimeters



5. Find the scale factor of ΔRST to ΔXYZ.

$$\frac{6}{8} = \frac{3}{4} = .75$$

6. Find the perimeter of each triangle.

ΔRST = 15.15 ΔXYZ = 20.2

7. What is the ratio of the perimeter ΔRST to ΔXYZ?

$$\frac{15.15}{20.2} = .75 = \frac{3}{4}$$

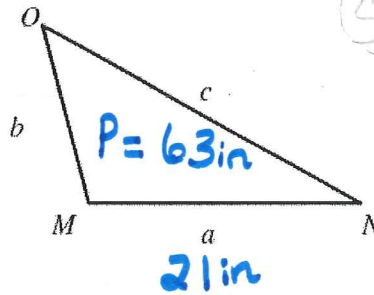
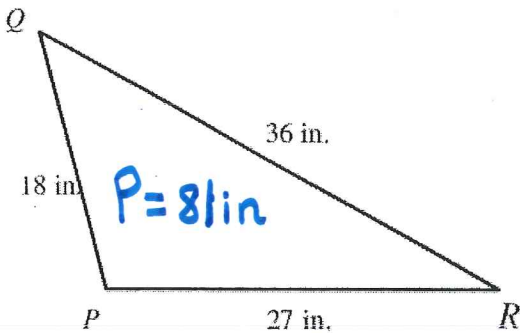
8. What do you notice about the ratios?

Same

Ratio of Perimeters:

$$\frac{PR}{\text{Perimeter ratio}} = SLR = SF$$

Ex1 Find $a, b, \& c$, if $\Delta PQR \sim \Delta MON$ and the perimeter of ΔMNO is 63 inches.



$SLR = PR$

$36 \div (\frac{9}{7})$

$$\frac{PR}{P} = \frac{SLR}{SLR} = \frac{63}{81} = \frac{7}{9}$$

$$\frac{MN}{PR} = \frac{7}{9}$$

$$\frac{MO}{PQ} = \frac{7}{9}$$

$$\frac{ON}{QR} = \frac{7}{9}$$

$$\frac{a}{27} = \frac{7}{9}$$

$$\frac{b}{18} = \frac{7}{9}$$

$$\frac{c}{36} = \frac{7}{9}$$

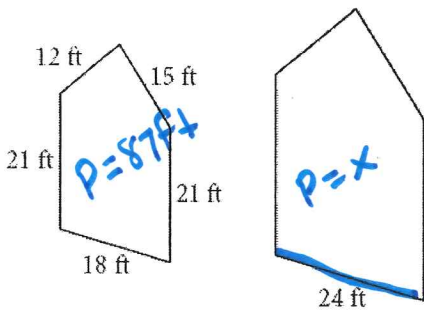
$9c = 36 \cdot \frac{7}{9}$

$a = 21 \text{ in}$

$b = 14 \text{ in}$

$c = 28 \text{ in}$

Ex2 Find the perimeter of the larger pentagon if the two pentagons are similar.



$$\frac{SLR}{P} = \frac{PR}{SLR} \rightarrow \frac{24}{18} = \frac{x}{87}$$

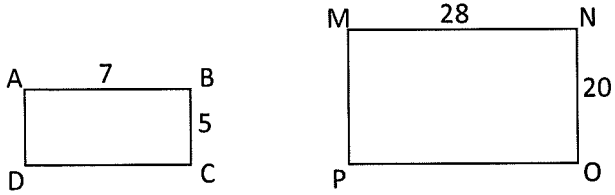
$$\frac{36}{1} \div \frac{9}{7} = \frac{36}{1} \times \left(\frac{7}{9}\right)$$

$x = 116 \text{ ft}$

Do pg. 410 #1,2, 8-10, 12,13

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7.5 Similar Figures and Perimeter



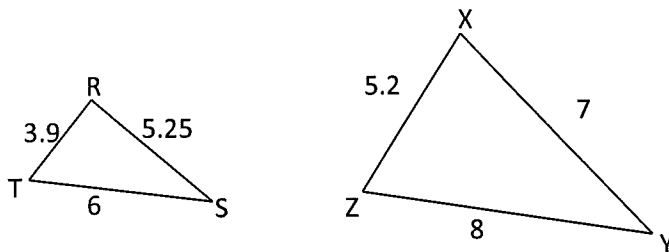
1. Find the scale factor of rect ABCD to rect MNOP.

2. Find the perimeter of each rectangle.

rect ABCD = _____ rect MNOP = _____

3. What is the ratio of the perimeter ABCD to MNOP?

4. What do you notice about the ratios?



5. Find the scale factor of ΔRST to ΔXYZ .

6. Find the perimeter of each triangle.

ΔRST = _____ ΔXYZ = _____

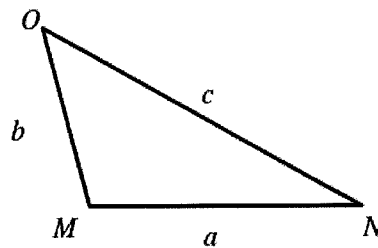
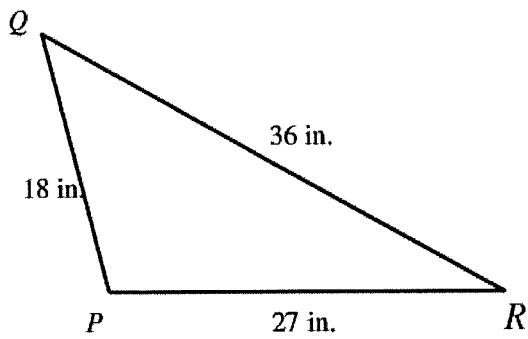
7. What is the ratio of the perimeter ΔRST to ΔXYZ ?

8. What do you notice about the ratios?

Ratio of Perimeters:

_____ = _____

Ex1 Find a , b , & c , if $\triangle PQR \sim \triangle MON$ and the perimeter of $\triangle MNO$ is 63 inches.



Ex 2 Find the perimeter of the larger pentagon if the two pentagons are similar.

