

Similarity, Perimeter and Area Ratios:

Similarity ratio = a:b	Perimeter ratio = a:b	Area ratio: $a^2:b^2$
------------------------	-----------------------	-----------------------

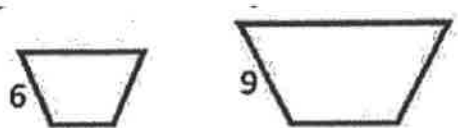
1. Similarity ratio = 5:7 Perimeter ratio = 5:7 Area ratio = 25:49

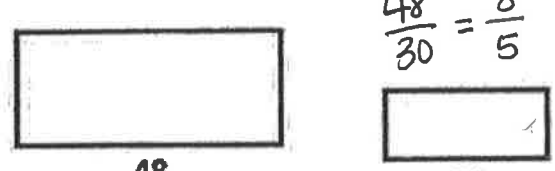
2. Similarity ratio = 3:8 Perimeter ratio = 3:8 Area ratio = 9:64


3. Similarity ratio = 2:13 Perimeter ratio = 2:13 Area Ratio = 4: 169

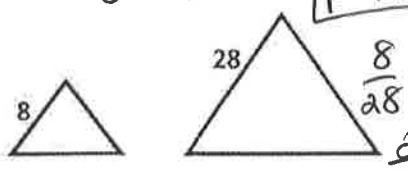
4. Similarity ratio = 1:2 Perimeter ratio = 1:2 Area ratio = 8:32
Simplified: 1:4

Find the missing values for each pair of similar figures.

5.  $\frac{6}{9} = \frac{2}{3}$
 P = 20 P = 30
 A = 20 A = 45

7.  $\frac{48}{30} = \frac{8}{5}$
 P = 144 p = 90
 A = 1152 A =
 $\frac{64}{25} = \frac{1152}{a}$
 $\frac{8}{5} = \frac{p}{90}$
 $5p = 720$
p = 144
 $64a = 28800$
a = 450


 p = ? p = 60
 A = 484 A =
 $\frac{2}{3} = \frac{20}{p}$
 $2p = 60$
p = 30
 $\frac{4}{9} = \frac{a}{45}$
 $4a = 180$
a = 20

8.  $\frac{8}{28} = \frac{2}{7}$
 P = 28 p = 98
 A = 24 A = 294
 $\frac{2}{7} = \frac{28}{p}$
 $2p = 196$
p = 98
 $\frac{4}{49} = \frac{a}{294}$
 $49a = 1176$
a = 24

9. Find the similarity ratio for two regular pentagons with areas 27 in² and 48 in².

$\frac{27}{48} = \frac{9}{16} = \frac{a^2}{b^2}$ $\frac{\sqrt{9}}{\sqrt{16}} = \frac{3}{4} = \frac{a}{b}$
3:4