

NAME

My

DATE

SCORE

# Ratios of Areas

For use after Section 11-7

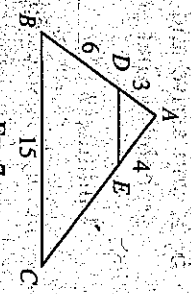
Complete.

- The ratio of the perimeters of two similar triangles is 3 : 5. The scale factor is 3/5 and the ratio of their areas is 9/25.
- The ratio of the areas of two similar rectangles is 25 : 36. The scale factor is 5/6 and the ratio of their perimeters is 5/6.
- The ratio of the areas of two squares is 16 : 36. The scale factor is 2/3 and the ratio of their perimeters is 2/3.
- Two circles have radii 5 and 7. The ratio of their areas is 25/49.
- $\triangle RST$  and  $\triangle XYZ$  are similar triangles with  $RS = 8$  and  $XY = 12$ . The ratio of their perimeters is 2/3 and the ratio of their areas is 4/9.

6. The areas of two circles are  $144\pi$  and  $64\pi$ . The ratio of their circumferences is 3/2.

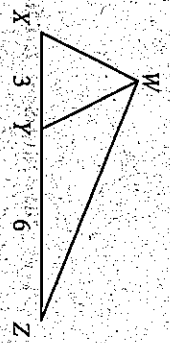
7. In the figure,  $\triangle ABC \sim \triangle ADE$ .

- The perimeter of  $\triangle ABC$  is 36 and the perimeter of  $\triangle ADE$  is 12.
- The ratio of their perimeters is 3:1.
- The ratio of their areas is 9:1.



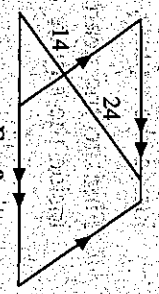
Ex. 7

8. The ratio of the areas of  $\triangle WXY$  and  $\triangle WYZ$  is 1/2.



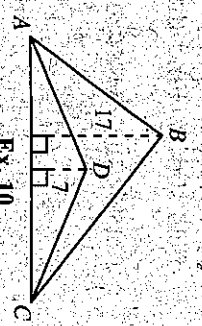
Ex. 8

9. The ratio of the perimeter of the smaller triangle to the perimeter of the larger triangle is 7/12.



Ex. 9

10. The ratio of the areas of  $\triangle ABC$  and  $\triangle ADC$  is 7/11.



Ex. 10

11. Two similar polygons have scale factor 3 : 5. The area of the larger polygon is 125. The area of the smaller polygon is 45.