

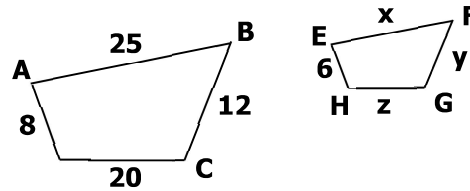
9-1 Exploring Similar Polygons

Name _____

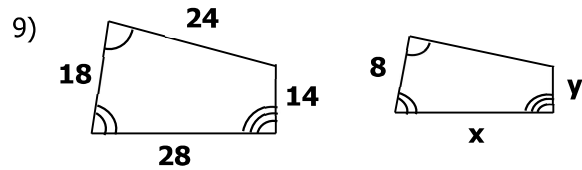
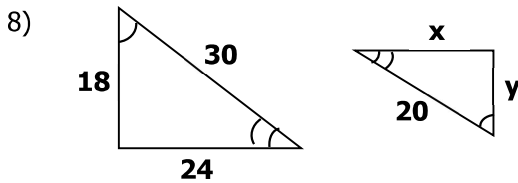
If quadrilateral ABCD is similar to quadrilateral EFGH, find each of the following.

- 1) Scale factor of ABCD to EFGH?
- 2) $EF =$ _____ 3) $FG =$ _____ 4) $GH =$ _____

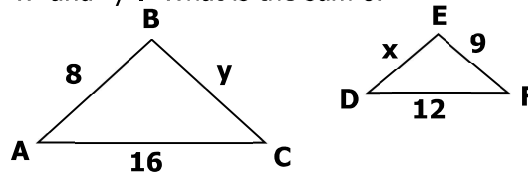
- 5) Perimeter of ABCD?
- 6) Perimeter of EFGH?
- 7) Ratio of perimeter of ABCD to EFGH?



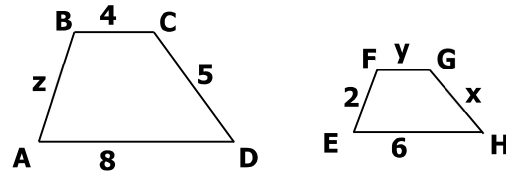
Each pair of polygons is similar. Find the values of "x" and "y".



- 10) Triangle ABC is similar to triangle DEF find the value of "x" and "y". What is the sum of the perimeters of the triangles?



- 11) Quadrilateral ABCD is similar to quadrilateral EFGH. Find the value of "x", "y", and "z". What is the perimeter of each figure?



- 12) For the figures above, the sum of the measures of $\angle A$ and $\angle C$ equals the sum of the measures of which two angles of quadrilateral EFGH?

- 13) Two rectangles are similar. The length of small rectangle is 4 and the length of the big rectangle is 12. If the perimeter of the smaller rectangle is 28, then what is the perimeter of the larger rectangle?

- 14) If two similar polygons have the perimeter of 36 and 21 inches. If the length of the side of the larger rectangle is 4 inches, then what is the product of the lengths of the polygons?

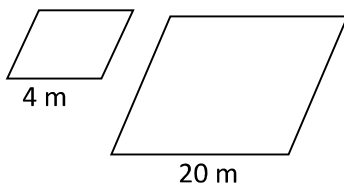
15) The ratio of the height of $\triangle CDE$ to the height of similar triangle $\triangle FGH$ is 3:5. The perimeter of $\triangle FGH$ is 25 cm. Find the perimeter of $\triangle CDE$.

16) If two parallelograms are similar with a ratio of 1:4 and the side of smaller one is 8 inches, what is the measure of side of the other parallelogram?

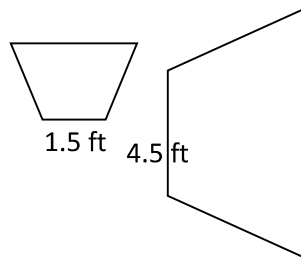
17) A rectangle is 8 feet long and 4 feet wide. If model of the rectangle was made smaller by a ratio of 1:4, then what would the perimeter of the model be?

What is the scale factor of the following similar figures? What would be the scale factor of the similar figures perimeter?

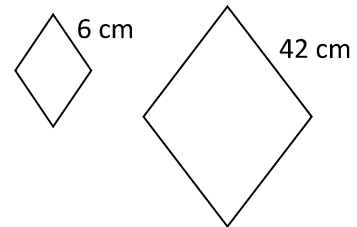
18)



19)

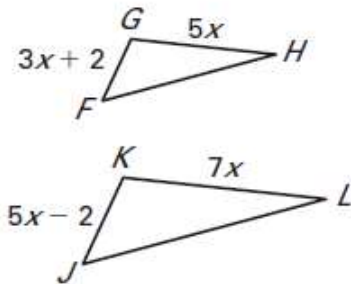


20)

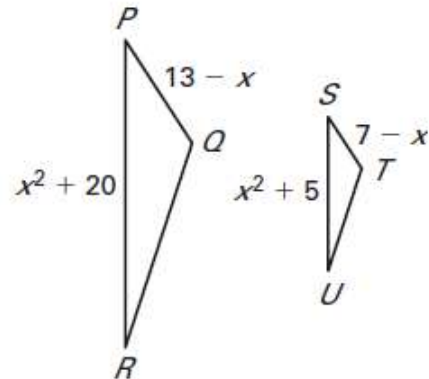


Find all possible values of x in the similar triangles.

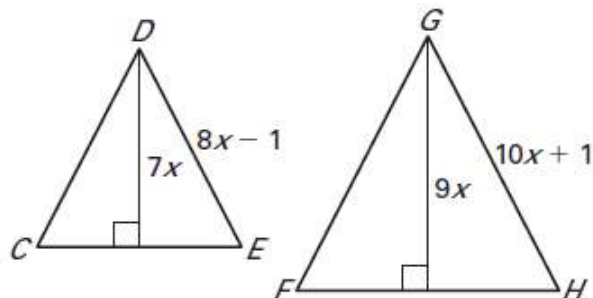
21) $\triangle FGH \sim \triangle JKL$



22) $\triangle PQR \sim \triangle STU$



23) $\triangle CDE \sim \triangle FGH$



24) $\triangle LMK \sim \triangle KMN$

