## Unit 1, Lesson 6: Scaling and Area

1. On the grid, draw a scaled copy of Polygon Q using a scale factor of 2 . Compare the perimeter and area of the new polygon to those of Q .

2. A right triangle has an area of 36 square units.

If you draw scaled copies of this triangle using the scale factors in the table, what will the areas of these scaled copies be? Explain or show your reasoning.

| scale factor | area (units ${ }^{2}$ ) |
| :---: | :---: |
| 1 | 36 |
| 2 |  |
| 3 |  |
| 5 |  |
| $\frac{1}{2}$ |  |
| $\frac{2}{3}$ |  |

3. Diego drew a scaled version of a Polygon $P$ and labeled it $Q$.


If the area of Polygon $P$ is 72 square units, what scale factor did Diego use to go from P to Q ? Explain your reasoning.
4. Here is an unlabeled polygon, along with its scaled copies Polygons A-D. For each copy, determine the scale factor. Explain how you know.

(from Unit 1, Lesson 2)
5. Solve each equation mentally.
a. $\frac{1}{7} \cdot x=1$
b. $x \cdot \frac{1}{11}=1$
c. $1 \div \frac{1}{5}=x$
(from Unit 1, Lesson 5)

