

TOPIC 4: DILATIONS AND SIMILARITY

Recall... A **DILATION** produces a figure that is similar to the original figure given (reduction/enlargement).

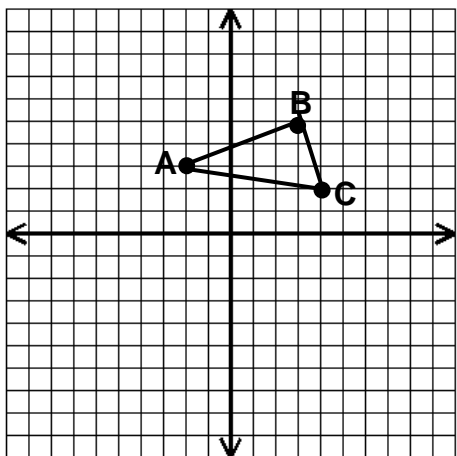
The **SCALE FACTOR** tells you how much larger or smaller the dilated figure is compared to the original.

In a reduction, the scale factor is _____.

In an enlargement, the scale factor is _____.

EXAMPLE 1

Use “slope” to produce a dilation of $\triangle ABC$ with a scale factor of 2 using the origin as your center of dilation.



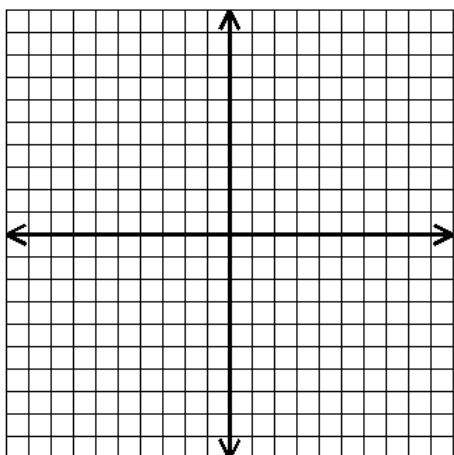
A' (_____, _____)

B' (_____, _____)

C' (_____, _____)

EXAMPLE 2

Use “slope” to produce a dilation of $\triangle ABC$ in Example 1 with a scale factor of 2 using B as your center of dilation.



A' (_____, _____)

B' (_____, _____)

C' (_____, _____)

EXAMPLE 3

$\triangle ABC$ has coordinates at $A(0,3)$, $B(3,6)$, and $C(6,0)$. Give the new coordinates of $\triangle ABC$ after it has been dilated with a scale factor of $\frac{2}{3}$. Use the origin as your center of dilation.

