

Scale Factor

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=176>

Explore the relationship between two shapes as the scale factor changes.

NGSSS

MA.7.G.4.1 – Change in dimensions & effect on perimeter/area/volume

Instructions

The size of **Rectangle A** can be modified by dragging the red vertices in the upper left and lower right corners of the figure. The **Scale Factor** can be set to any integer value from 1 to 6.

Rectangle B will correspondingly appear from 1 to 6 times as large as Rectangle A.

Exploration

How does the ratio between the perimeters change as the scale factor changes?

How does the ratio between the areas change as the scale factor changes?

Measurements

Length B / Length A = 4.0
 Height B / Height A = 4.0

Perimeter B = 648.0
 Perimeter A = 162.0

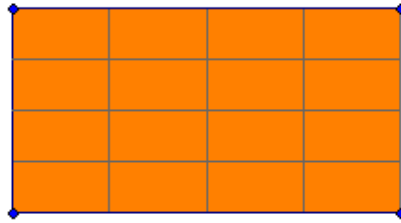
Perim B / Perim A = 4.0

Area A = 1484.0

Area B = 23744.0

Area B / Area A = 16.0

Length B = 212.0
 Height B = 112.0



Rectangle B

Length A = 53.0
 Height A = 28.0



Rectangle A

