

A transformation whose preimage and image are similar.

### Scale Factor, $k$

How much the object grows or shrinks

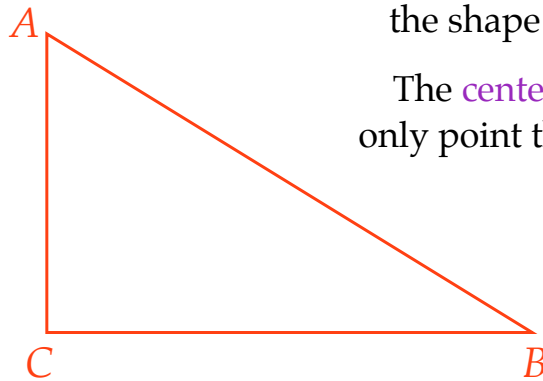
If  $k > 1$ , enlargement

If  $0 < k < 1$ , reduction

### Center

The fixed point around which the shape grows or shrinks

The center of dilation is the only point that does not change



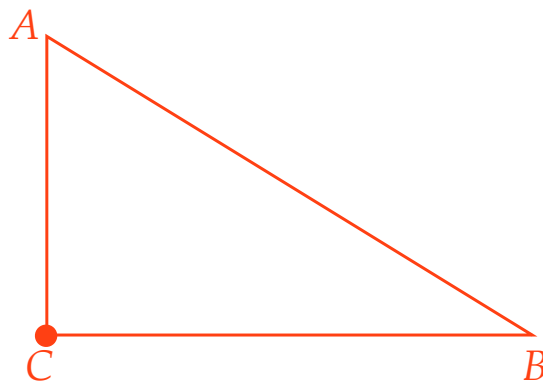
A transformation whose preimage and image are similar.

### Scale Factor, $k$

$$k = 1.5$$

### Center

Center:  $C$



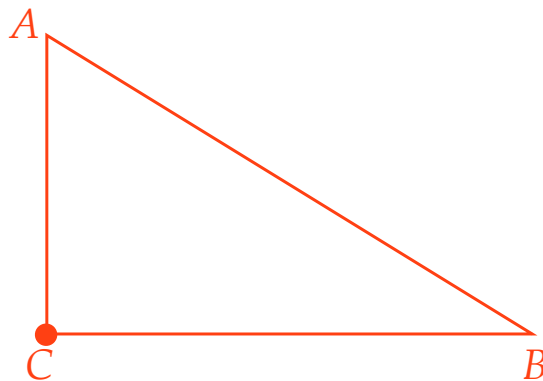
A transformation whose preimage and image are similar.

Scale Factor,  $k$

$$k = 0.6$$

Center

Center:  $C$



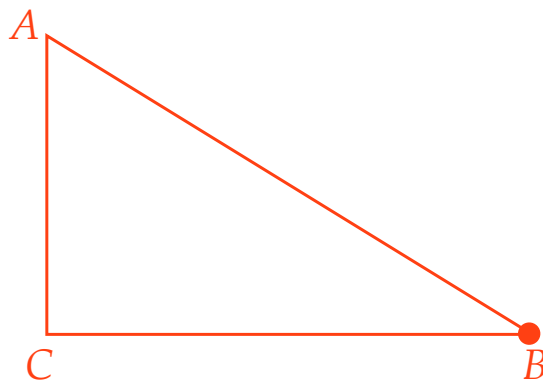
A transformation whose preimage and image are similar.

Scale Factor,  $k$

$$k = 0.8$$

Center

Center:  $B$



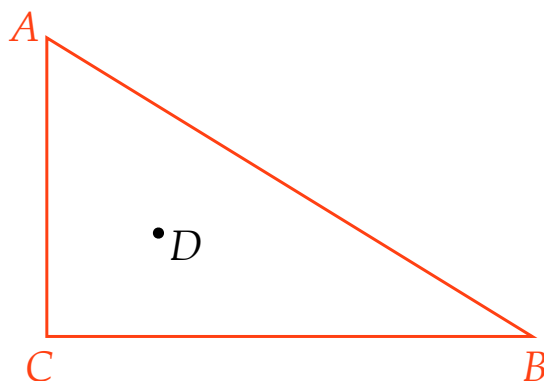
A transformation whose preimage and image are similar.

Scale Factor,  $k$

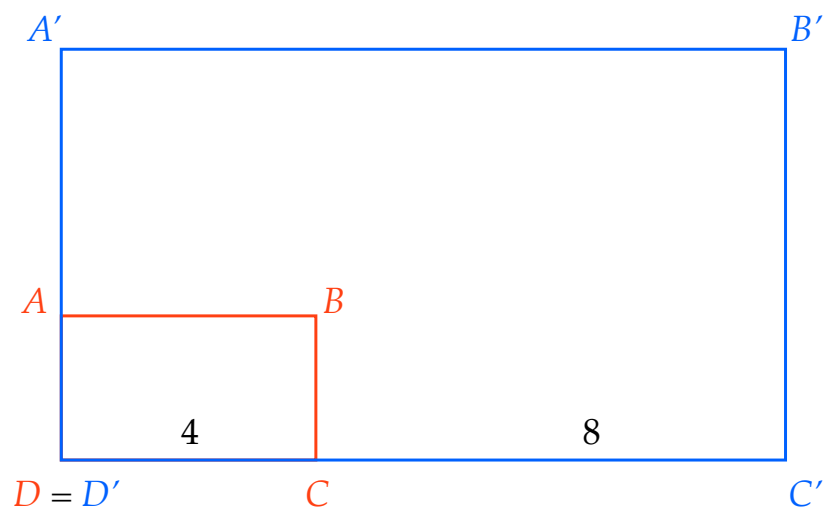
$$k = 1.4$$

Center

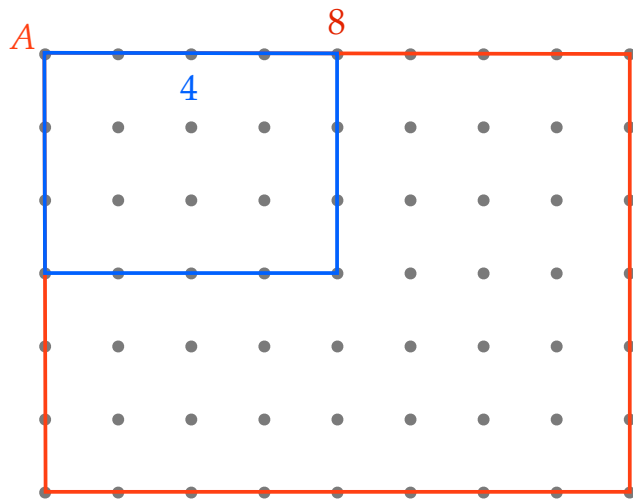
Center:  $D$



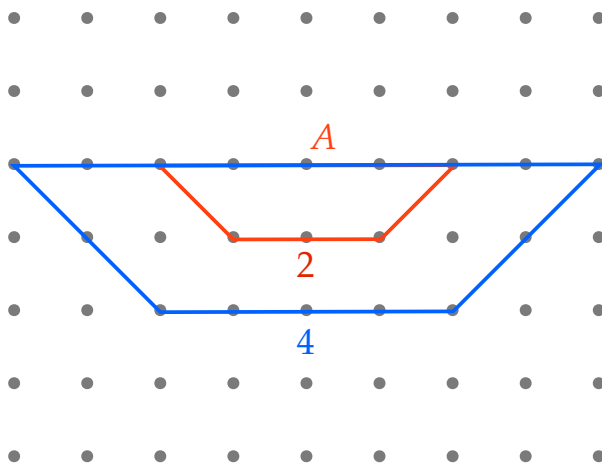
The blue figure is a dilation of the red figure. Determine the scale factor and center of the following dilations.



The blue figure is a dilation of the red figure. Determine the scale factor and center of the following dilations.



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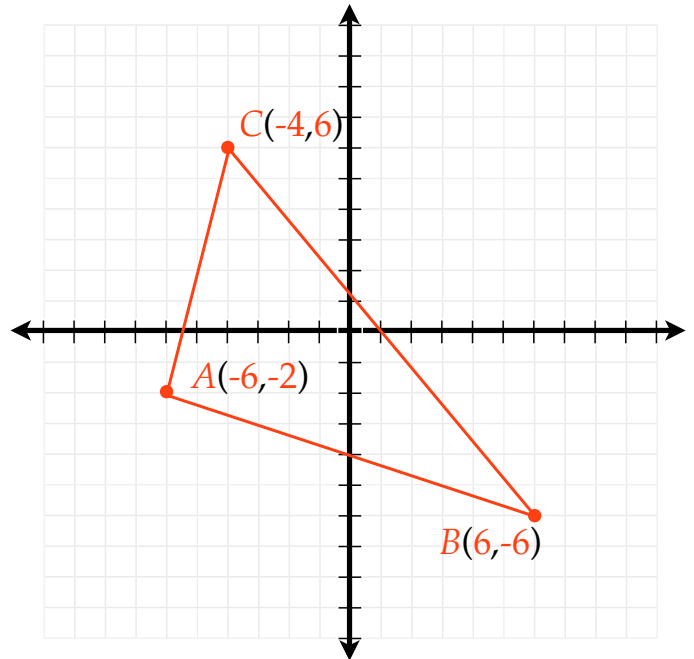


Find the **image** of the **following figure** with a **scale factor** of 1.5 and **center** at **origin (0,0)**.

$$A(-6,-2) \rightarrow$$

$$B(6,-6) \rightarrow$$

$$C(-4,6) \rightarrow$$



Find the **image** of the **following figure** with a **scale factor** of 0.5 and **center** at **origin (0,0)**.

$$W(-8,-2) \rightarrow$$

$$X(6,-10) \rightarrow$$

$$Y(4,4) \rightarrow$$

$$Z(-4,8) \rightarrow$$

