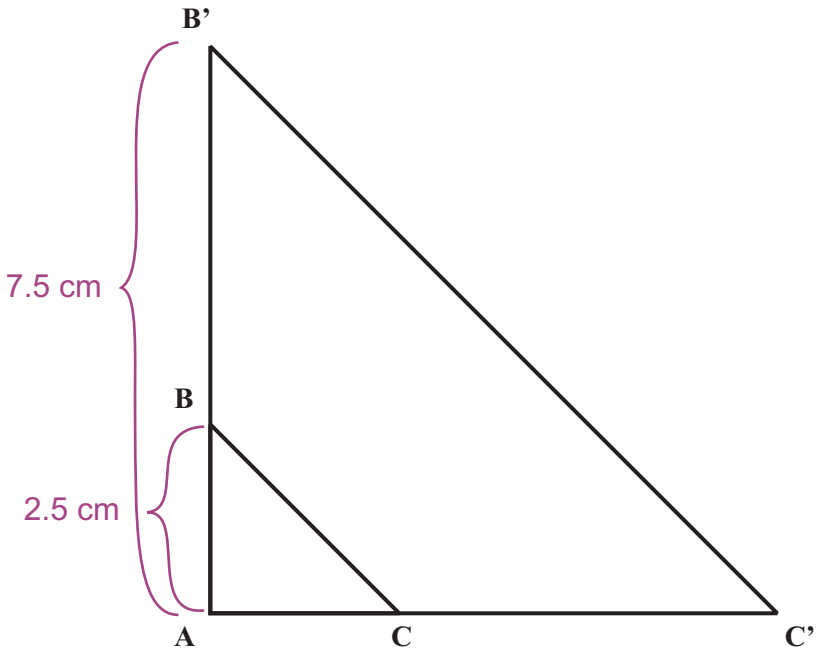
NAME_____

Module 11 **Transformations of Shapes**
Lesson 3 **Dilations**

Guided Practice 11.3

Set 1

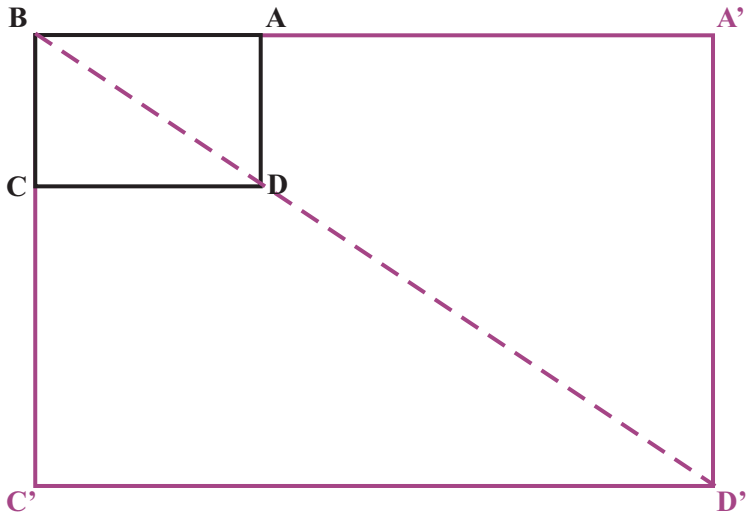
1 $\triangle AB'C'$ is a dilation of $\triangle ABC$. Find the center and scale factor of dilation. Use a metric ruler to measure.



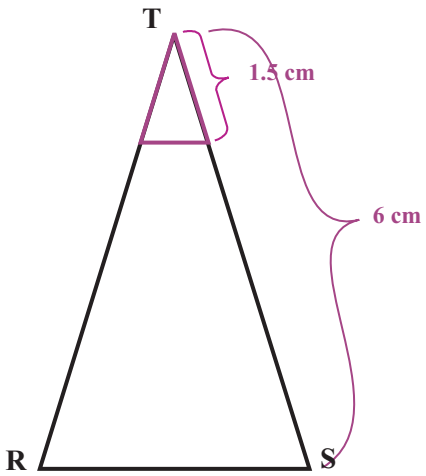
Center: A

Scale factor: $\frac{7.5}{2.5} = 3$

2 Construct a dilation of quadrilateral *ABCD* with center *B* and scale factor three.



3 Construct a dilation of the isosceles triangle *RST* with center *T* and scale factor 0.25. Use a metric ruler to measure.



6 cm × 0.25 = 1.5 cm

Set 2

1 $\Delta A'B'C'$ is a dilation of $\triangle ABC$. Find the scale factor of dilation.

- $A(0, 4)$, $B(2, 7)$, and $C(-4, -1)$
- $A'(0, 16)$, $B'(8, 28)$, and $C'(-16, -4)$

$A(0, 4) \rightarrow A'(0, 16)$
$B(2, 7) \rightarrow B'(8, 28)$
$C(-4, -1) \rightarrow C'(-16, -4)$
Scale factor: 4

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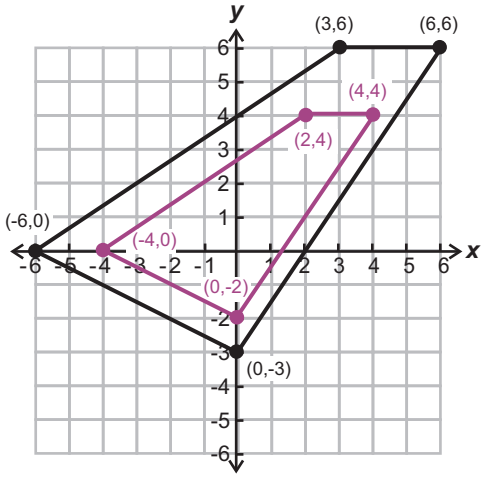
Module 11 Transformations of Shapes
Lesson 3 Dilations

2 Quadrilateral *PQRS* is dilated by the scale factor 0.5 with center (0, 0). What are the coordinates of the vertices of the dilated image?

***P*(-3, 0) → *P*'(-1.5, 0)**
***Q*(-1, -5) → *Q*'(-0.5, -2.5)**
***R*(1, -2) → *R*'(0.5, -1)**
***S*(4, 1) → *S*'(2, 0.5)**

3 Perform a dilation of the quadrilateral with scale factor $\frac{2}{3}$ and with center (0,0).



4 Perform a dilation of the triangle with scale factor 2 and with center (0,0).