**[](http://ritter.tea.state.tx.us/student.assessment/resources/online/2003/grade11/math.htm)OBJECTIVE: S.W.B.A.T. determine the differences between transformations, translations, dilations, and rotations.**

**Reflection**

1. Plot the point P(-4, 5) on the grid to the right.
2. Reflect P over the x axis. What are the new coordinates of P’?
3. Plot the point Q(7, -1) on the grid to the right.
4. Reflect Q over the y axis. What are the new coordinates of Q’?

[](http://ritter.tea.state.tx.us/student.assessment/resources/online/2003/grade11/math.htm)**Translation:**

1. Plot the points (-3, 4) (4, 4) (-3, -2) and (4, -2) on the grid to the right.
2. What shape do these points form? How do you know?
3. In a different color, translate the figure (x + 2, y – 3).
4. Use the distance formula to show that one pair of corresponding sides are congruent.

**[](http://ritter.tea.state.tx.us/student.assessment/resources/online/2003/grade11/math.htm)**

**Rotation**   
Plot the T(-4, 5) on the grid to the right. Rotate the point T 90° counterclockwise. What are the new coordinate of the point t:

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**Dilation:**

[](http://ritter.tea.state.tx.us/student.assessment/resources/online/2003/grade11/math.htm)What are the coordinates of the image of ΔDEF formed by (-3, 2) (2, 0) (2, 3) after D3?

**Mixed Practice:**

1. Determine whether the lines are parallel, perpendicular or neither:

1. Find the distance between the points (-4, 18) and (3, 9)
2. Find the midpoint of the segment with endpoints (-5, 9) and (3, 12)
3. Name the property illustrated in each statement

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