

Assignment

Write

Complete each definition.

1. A function that rotates points around a center point through an angle is called a _____.
2. Concentric circles are circles with a common _____.

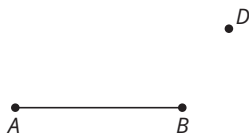
Remember

A rotation is a function that maps its input, a point P , to another location, $f(P)$. This movement to a new location is defined by a center of rotation, E , and a rotation angle, t . A rotation function is written as $R_{E,t}(P)$.

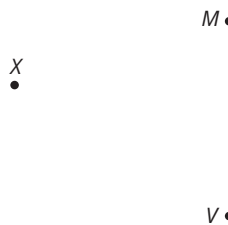
Practice

1. Complete each rotation given the function.

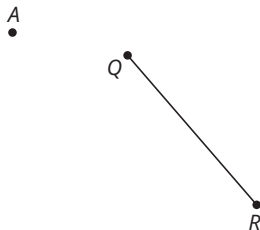
a. $R_{D,45}(\overline{AB})$



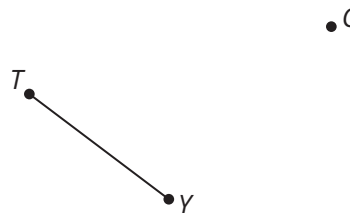
b. $R_{X,-25}(\overline{MV})$



c. $R_{A,125}(\overline{QR})$

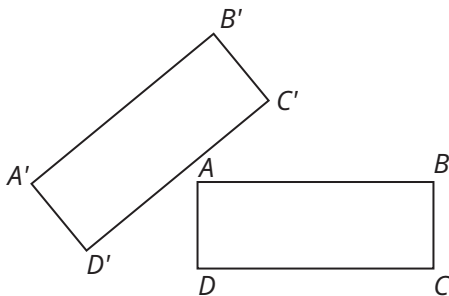


d. $R_{C,80}(\overline{TY})$

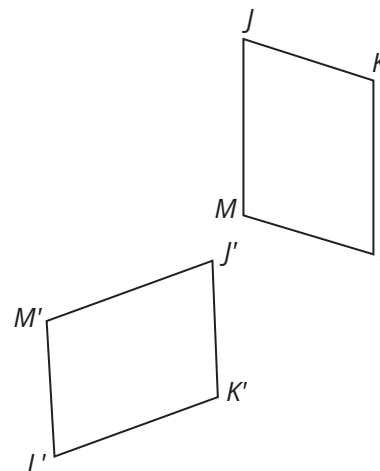


2. Use what you know to determine the center of rotation and rotation angle for the transformation of each figure. Write each rotation as a function.

a.

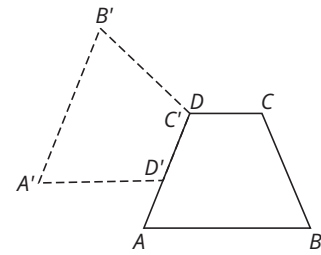


b.



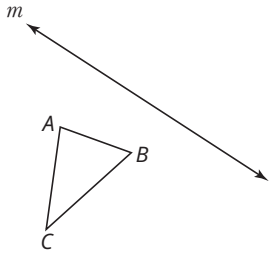
Stretch

Determine and draw the sequence of transformations that could be used to transform Trapezoid $ABCD$ into Trapezoid $A'B'C'D'$. Include the locations of lines and points that the figure is reflected around, translated on, or rotated about. Also include the rotation angle.

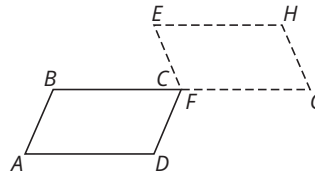


Review

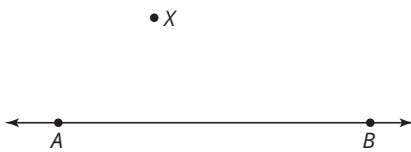
1. Complete the reflection given the function $R_m(ABC)$.



2. Describe the sequence of transformations that will map parallelogram $ABCD$ onto parallelogram $GHEF$.



3. Construct a line perpendicular to line AB that passes through point X .



4. Duplicate $\angle Q$.

