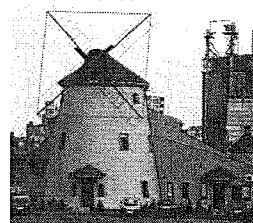


Ready, Set, Go!

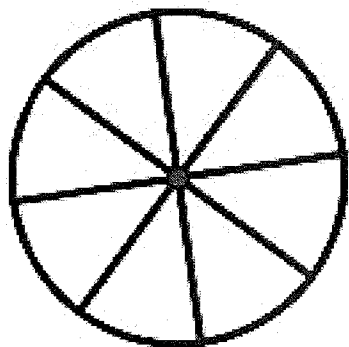


Ready

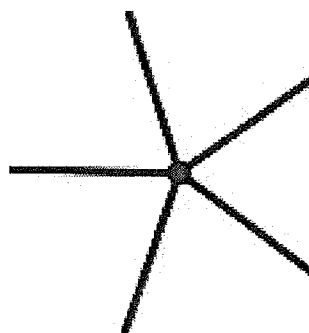
Topic: Rotation as a transformation, what does it mean?

©2012 www.flickr.com/photos/tamburiX

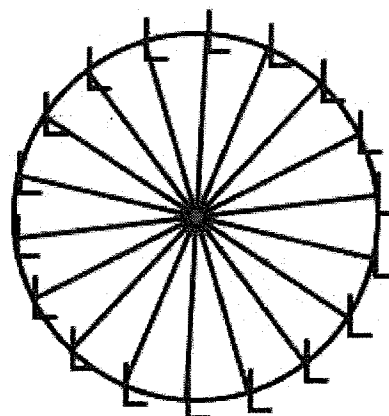
1. What fraction of a turn does the wagon wheel below need to turn in order to appear the very same as it does right now? How many degrees of rotation would that be?



2. What fraction of a turn does the propeller below need to turn in order to appear the very same as it does right now? How many degrees of rotation would that be?



3. What fraction of a turn does the model of a Ferris wheel below need to turn in order to appear the very same as it does right now? How many degrees of rotation would that be?



© 2012 Mathematics Vision Project | MVP

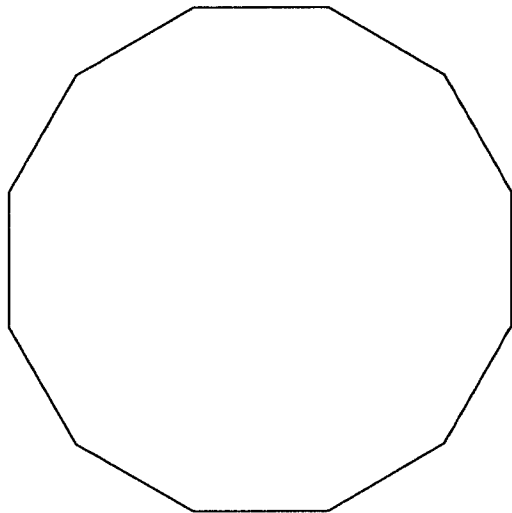
In partnership with the Utah State Office of Education

Licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported license.

Set

Topic: Finding angles of rotation for regular polygons.

4. Find the angle(s) of rotation that will carry the 12 sided polygon below onto itself.



5. What are the angles of rotation for a 20-gon? How many lines of symmetry (lines of reflection) will it have?

6. What are the angles of rotation for a 15-gon? How many line of symmetry (lines of reflection) will it have?

7. How many sides does a regular polygon have that has an angle of rotation equal to 180° ? Explain.

8. How many sides does a regular polygon have that has an angle of rotation equal to 20° ? How many lines of symmetry will it have?

© 2012 Mathematics Vision Project | MVP

In partnership with the Utah State Office of Education

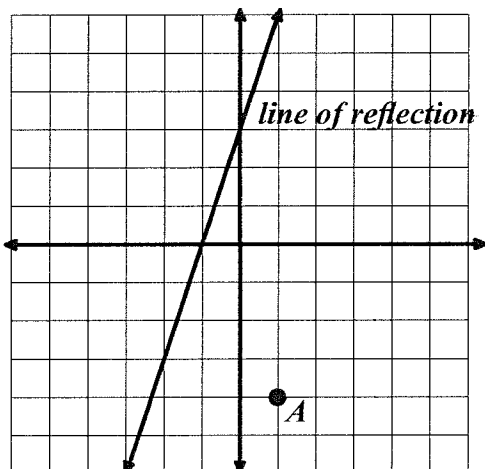
Licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported license.

Congruence, Construction, and Proof | 6.6

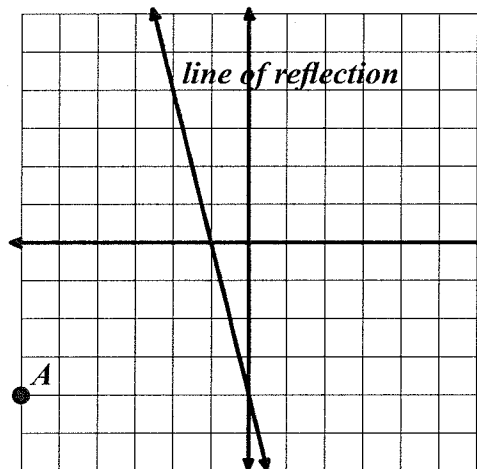
Go

Topic: Reflecting and Rotating points on the coordinate plane.

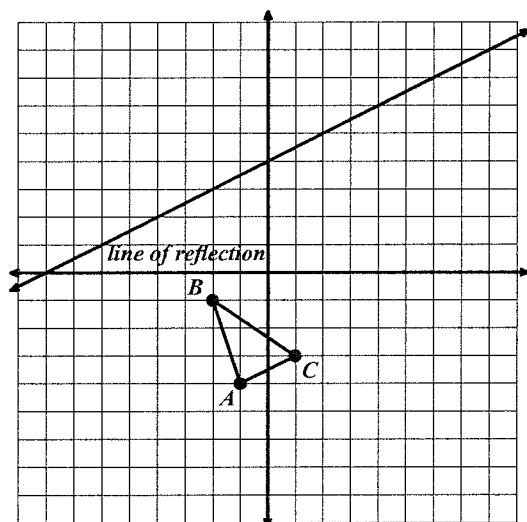
9. Reflect point A over the line of reflection and label the image A' .



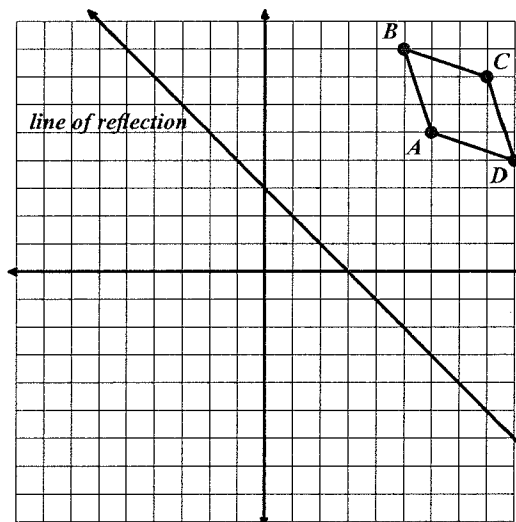
10. Reflect point A over the line of reflection and label the image A' .



11. Reflect triangle ABC over the line of reflection and label the image $A'B'C'$.



12. Reflect parallelogram $ABCD$ over the line of reflection and label the image $A'B'C'D'$.



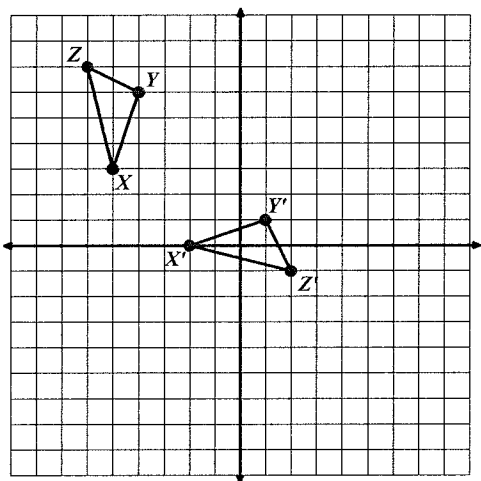
© 2012 Mathematics Vision Project | MVP

In partnership with the Utah State Office of Education

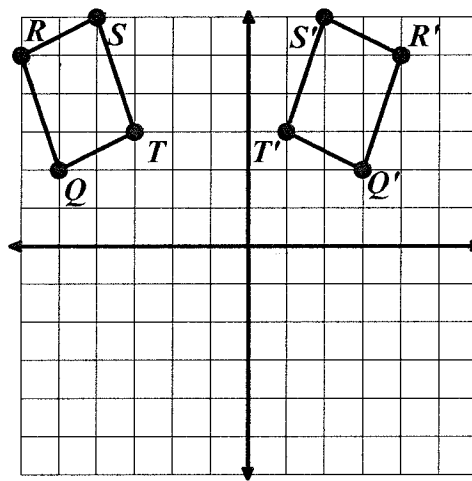
Licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported license.

Congruence, Construction, and Proof | 6.6

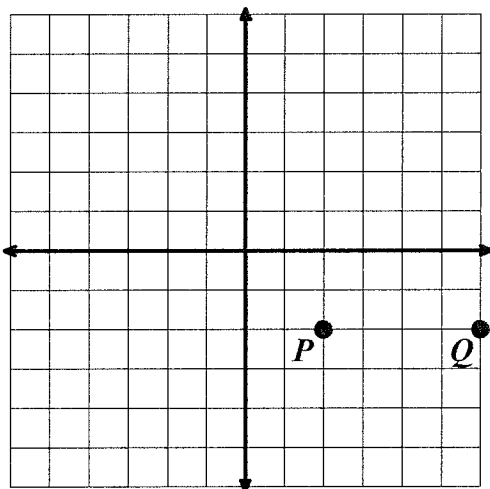
13. Given triangle XYZ and its image $X'Y'Z'$ draw the line of reflection that was used.



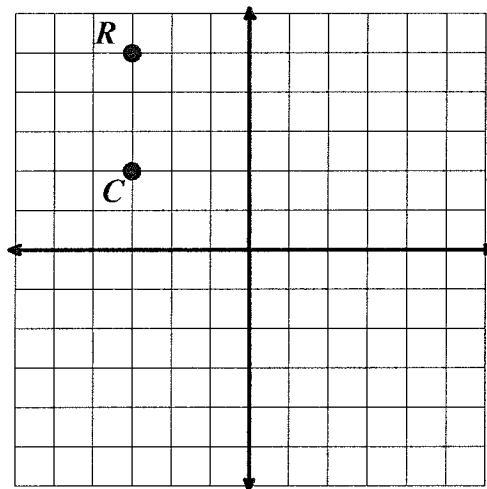
14. Given parallelogram $QRST$ and its image $Q'R'S'T'$ draw the line of reflection that was used.



15. Using point P as a center of rotation. Rotate point Q 120° clockwise about point P and label the image Q' .



16. Using point C as the center of rotation. Rotate point R 270° counter-clockwise about point C and label the image R' .



© 2012 Mathematics Vision Project | MVP

In partnership with the Utah State Office of Education

Licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported license.