Geometry Unit 8: Year-to-date Regents review

Bronx Early College Academy

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13 February 2023 - 17 February 2023

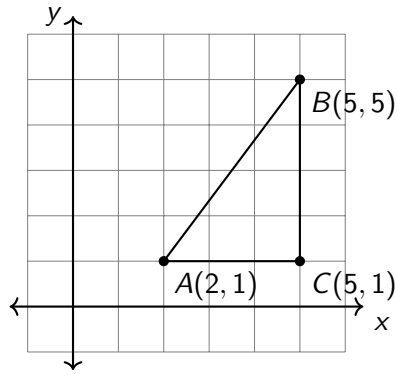
Learning Target: I can calculate triangle angles

HSG.CO.A.5 Congruence transformations 8.1 Monday 13 February

Do Now

1. Review your Jumprope grades
2. Right $\triangle ABC$ with $m\angle A = 53°$. Find $m\angle B$

Lesson: Internal and external triangle angle measures
Homework: Complete the classwork practice, Deltamath problem set



Triangle angle theorems, internal and external angle measures

Find this information in your notebook (October 24th)

Triangle sum theorem $\mathrm{m}\angle A + \mathrm{m}\angle B + \mathrm{m}\angle C = 180^\circ$

External angle theorem $\mathrm{m}\angle A + \mathrm{m}\angle B = \mathrm{m}\angle BCD$

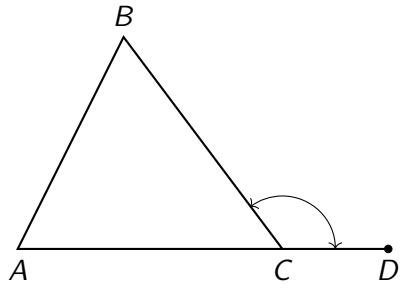
Linear pair angles that make a straight line, 180°

Supplementary angles that sum to 180°

Complementary angles that sum to 90°

Interior Inside, internal

Exterior Outside, external

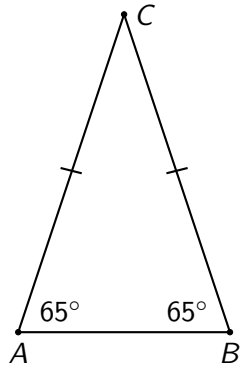


Learning Target: I can work with parallel lines

HSG.CO.A.5 Congruence transformations 8.2 Tuesday 14 February

Do Now: Isosceles $\triangle ABC$ has two angles measuring 65°. Find the measure of the 3rd angle, m$\angle C$.

Lesson: Isosceles triangles, parallel lines and transversals
Homework: Complete classwork, Deltamath assignment

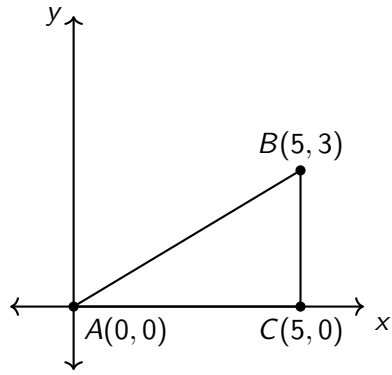


Learning Target: I can partition a line segment

HSG.CO.A.5 Congruence transformations 8.3 Thursday 16 February

Do Now: Find the angle measures of right $\triangle ABC$.
$m\angle A = 30^\circ$
$m\angle B =$
$m\angle C =$

Lesson: Rotation, classwork practice
Homework: Complete classwork, Deltamath assignment



Learning Target: I can employ multiple rigid motions

HSG.CO.A.5 Congruence transformations 7.4 Monday 23 January

Do Now: Rotate $\triangle ABC$ counterclockwise 90° around the origin.

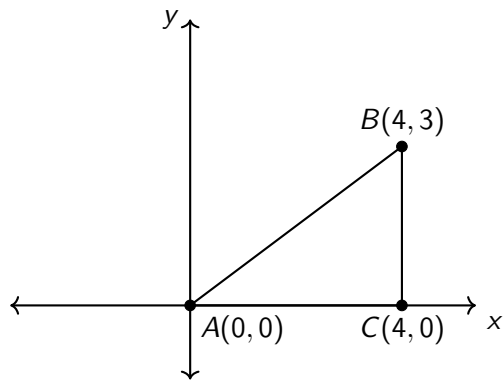
$A(0,0) \rightarrow$

$B(4,3) \rightarrow$

$C(4,0) \rightarrow$

Lesson: Composition of transformations, mixed practice

Homework: Complete classwork, Deltamath assignment



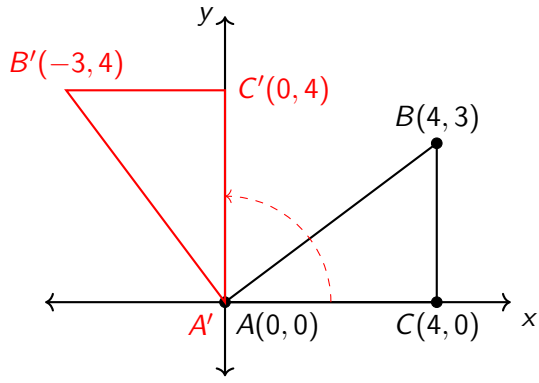
Solution: Rotate $\triangle ABC$ counterclockwise 90° around the origin.

$A(0,0) \to A'(0,0)$

$B(4,3) \to B'(-3,4)$

$C(4,0) \to C'(0,4)$

Check for understanding: What is the measure of angle $\angle CAC'$?



A *composition* is multiple transformations, one after the other

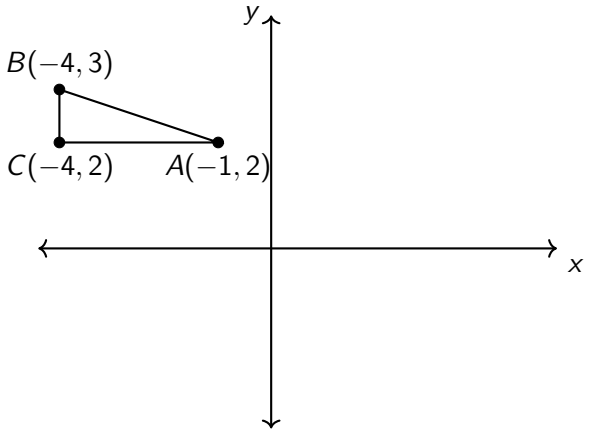
Example: Translate $\triangle ABC$ to the right 5 units then reflect it over the x-axis.

$T_{+5,0}$ $\quad$ $reflect_{x-axis}$

$A(-1,2) \rightarrow$

$B(-4,3) \rightarrow$

$C(-4,2) \rightarrow$



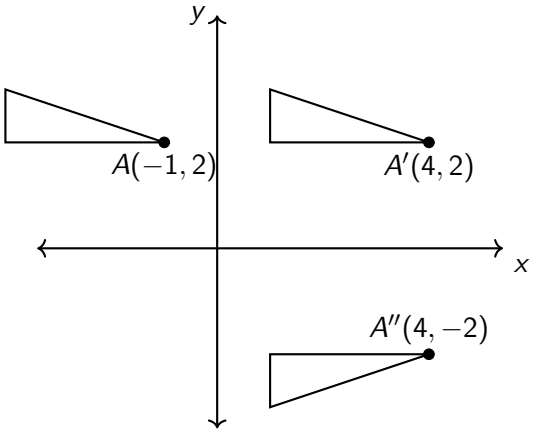
Translate $\triangle ABC$ to the right 5 units then reflect it over the x-axis.

$T_{+5,0}$ $\quad$ $reflect_{x-axis}$

$A(-1,2) \rightarrow A'(4,2) \rightarrow A''(4,-2)$

$B(-4,3) \rightarrow B'(1,3) \rightarrow B''(1,-3)$

$C(-4,2) \rightarrow C'(1,2) \rightarrow C''(1,-2)$



Learning Target: I can employ multiple rigid motions

HSG.CO.A.5 Congruence transformations 7.5 Wednesday 1 February

Do Now: Slide $\triangle ABC$ to the left three and up two.

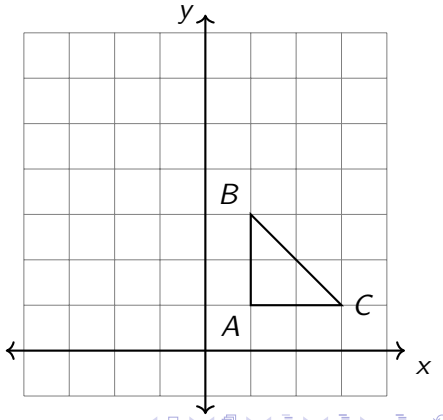
$A(1,1) \rightarrow$

$B(1,3) \rightarrow$

$C(3,1) \rightarrow$

Lesson: Composition of transformations, mixed practice

Homework: Complete classwork, Deltamath assignment

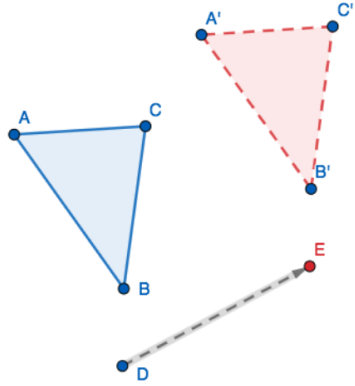


Learning Target: I can record a transformation using geogebra

HSG.CO.A.5 Congruence transformations 7.6 Friday 3 February

Do Now: Open the attached slide document and edit your name

Lesson: Use geogebra to perform a translation, reflection, and rotation



$\triangle ABC \rightarrow \triangle A'B'C'$

Translation by vector $\overrightarrow{DE}$

Learning Target: I can recognize symmetry

HSG.CO.A.5 Congruence transformations 7.7 Monday 6 February

Do Now: Reflect the $\triangle$ across the y-axis.

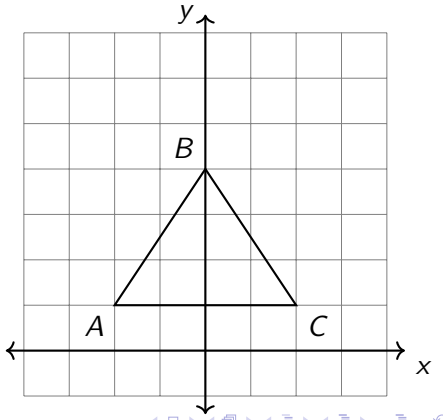
$A(-2, 1) \rightarrow$

$B(0, 4) \rightarrow$

$C(2, 1) \rightarrow$

Lesson: Transformations "onto," symmetry

Homework: Complete classwork, Deltamath assignment



Learning Target: I can recognize symmetry

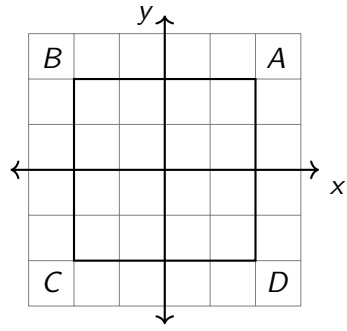
Rotate the square 90° counterclockwise around its center.

onto When the image of a figure is congruent to the original figure

symmetry When a figure is invariant under a transformation

bilateral symmetry When a figure is the same after a reflection across its mid-line

radial symmetry A shape is the same after a rotation around its center



Learning Target: I can construct a line of symmetry using Geogebra

HSG.CO.A.5 Congruence transformations 7.8 Tuesday 7 February

Do Now Pre-Quiz: Deltamath practice test (20 minutes max).

Folder check: 7.7 Problem set complete?

Lesson: Geogebra line of symmetry

Homework: Complete transformations slides