LESSON DIGITS 9-4
CONGRUENT FIGURES

3/4/2020

1

Goal: I will be able to **determine if two figures are congruent.**

Tool Bag
Formulas, equations, Vocabulary, etc

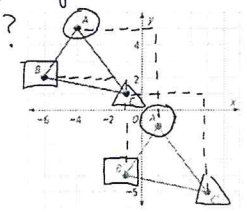
Congruent Figures

Here's How...Notes & Examples

$\cong$ means congruent

two figures (shapes) that are the same. You can move one shape to the other using a sequence of motions

$\triangle ABC \cong \triangle A'B'C'$?

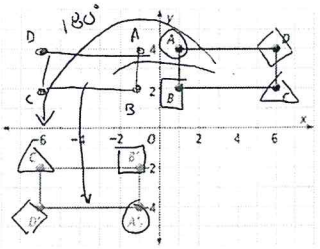


Yes, because you translate 5 units to the right and 6 units down

2

Example 1

Describe a sequence of rigid motions that maps ABCD to A'B'C'D'.



Option 1

Reflect across the y-axis, then reflect across the x-axis

Option 2

Rotate 180°

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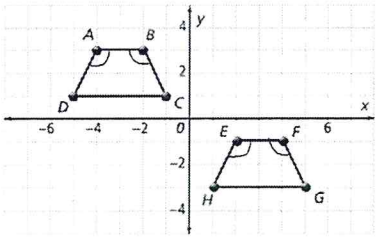
Example 2

Is trapezoid ABCD ≅ EFGH?



Step 1: Look at length of lines

$AB = GF$ $AD = EH$
$CD = GH$ $BC = FG$

Step 2: Look at angles

$\measuredangle A = \measuredangle E$ $\measuredangle C = \measuredangle G$
$\measuredangle B = \measuredangle F$ $\measuredangle D = \measuredangle H$

$\measuredangle$ means angle

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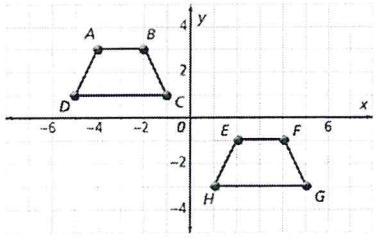
Example 2

Is trapezoid ABCD ≅ EFGH?

|| means parallel



Step 3: Look at parallel lines

$AB \parallel CD$ $EF \parallel GH$

Yes, they are congruent.

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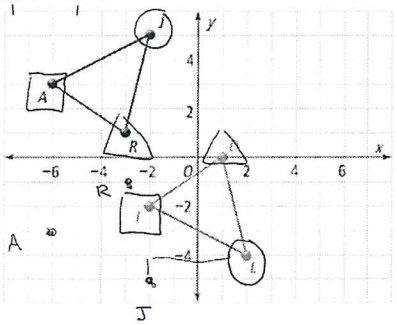
Example 3

Is $\triangle JAR \cong \triangle LID$?

Can we make moves so the corners match up?



across the x-axis, then translate 4 units right and 1 unit up

They are congruent.