

# Focus & Within Course Coherence

Task Handout, Geometry

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# Major Task #1

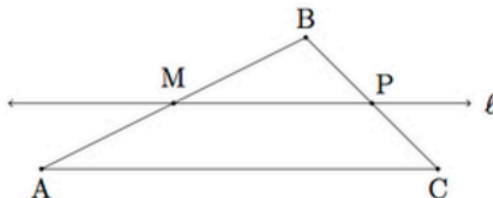
If two triangles satisfy the SAS criteria, describe the rigid motion(s) that would map one onto the other in the following cases.

1. The two triangles share a single common vertex.
2. The two triangles are distinct from each other.
3. The two triangles share a common side.

Source: EngageNY.org of the New York State Education Department. Geometry Mathematics, Module 1, Lesson 22. Available from <https://www.engageny.org/resource/geometry-module-1-topic-d-lesson-22/file/57766> accessed 10 June 2016.

## Major Task #2

Suppose  $ABC$  is a triangle. Let  $M$  be the midpoint of  $\overline{AB}$  and  $\ell$  the line through  $M$  parallel to  $\overleftrightarrow{AC}$ :



- Show that angle  $CAB$  is congruent to angle  $PMB$  and that angle  $BPM$  is congruent to angle  $BCA$ . Conclude that triangle  $MBP$  is similar to triangle  $ABC$ .
- Use part (a) to show that  $P$  is the midpoint of  $\overline{BC}$ .

Source: Available from <https://www.illustrativemathematics.org/content-standards/HSG/SRT/B/4/tasks/1095> accessed on 10 June 2016, licensed by Illustrative Mathematics under CC BY-NC-SA 4.0.

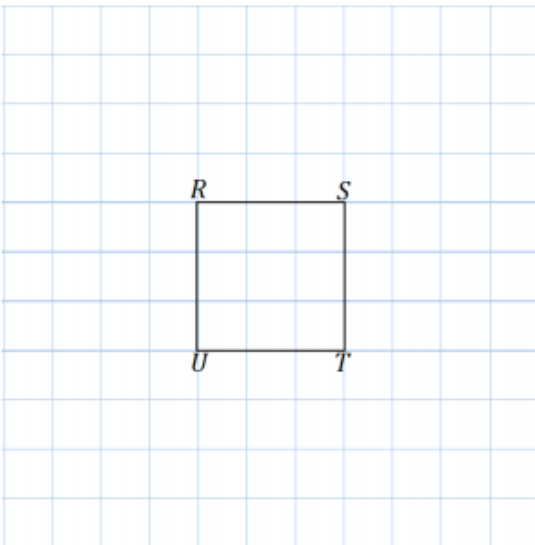
# Supporting Task #1

## Problem Set

Translate each figure according to the instructions provided.

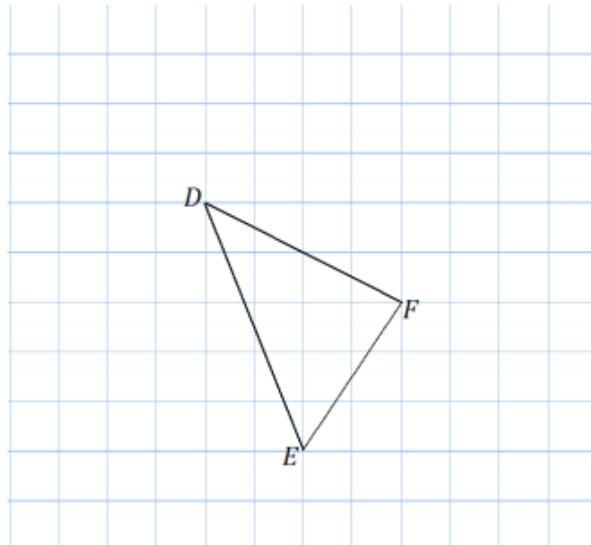
1. 2 units down and 3 units left

Draw the vector that defines the translation.



2. 1 unit up and 2 units right

Draw the vector that defines the translation.



Source: EngageNY.org of the New York State Education Department. Geometry Mathematics, Module 1, Lesson 16. Available from <https://www.engageny.org/resource/geometry-module-1-topic-c-lesson-16/file/57331> accessed 10 June 2016.

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# Within Course Coherence Task #1

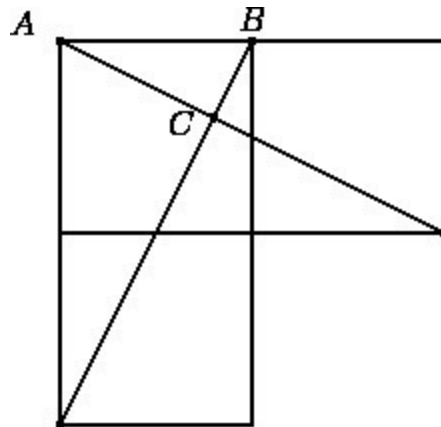
$GDAY$  is a rhombus. If point  $G$  has coordinates  $(2, 6)$  and  $A$  has coordinates  $(8, 10)$ , what is the equation of the line that contains the diagonal  $\overline{DY}$  of the rhombus?

Source: EngageNY.org of the New York State Education Department. Geometry Mathematics, Module 4, End of Module Assessment. Available from <https://www.engageny.org/resource/geometry-module-4/file/106211> accessed 10 June 2016.

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## Within Course Coherence Task #2

Three unit squares and two line segments connecting two pairs of vertices are shown. What is the area of  $\triangle ABC$ ?



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