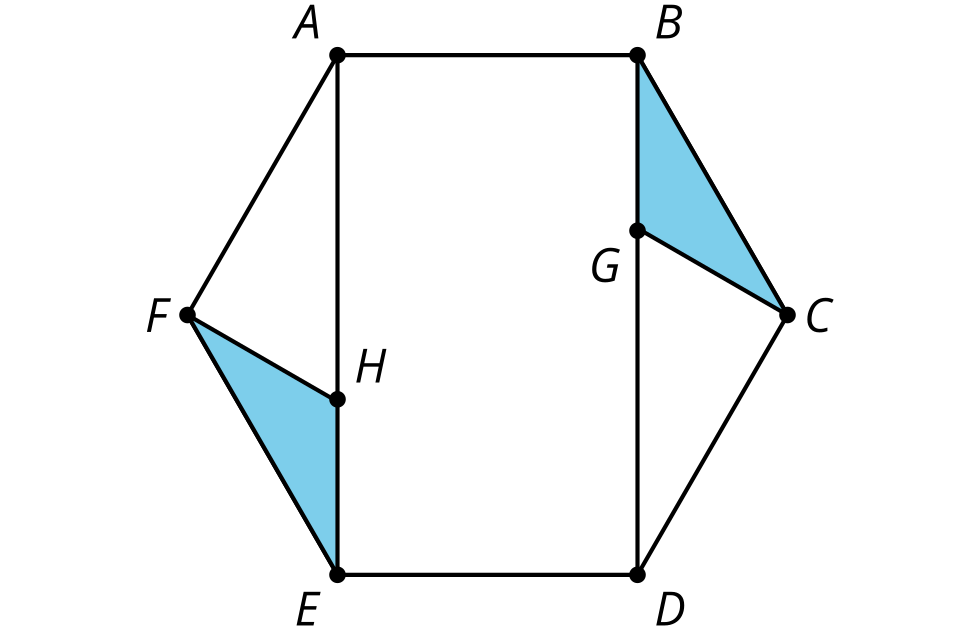
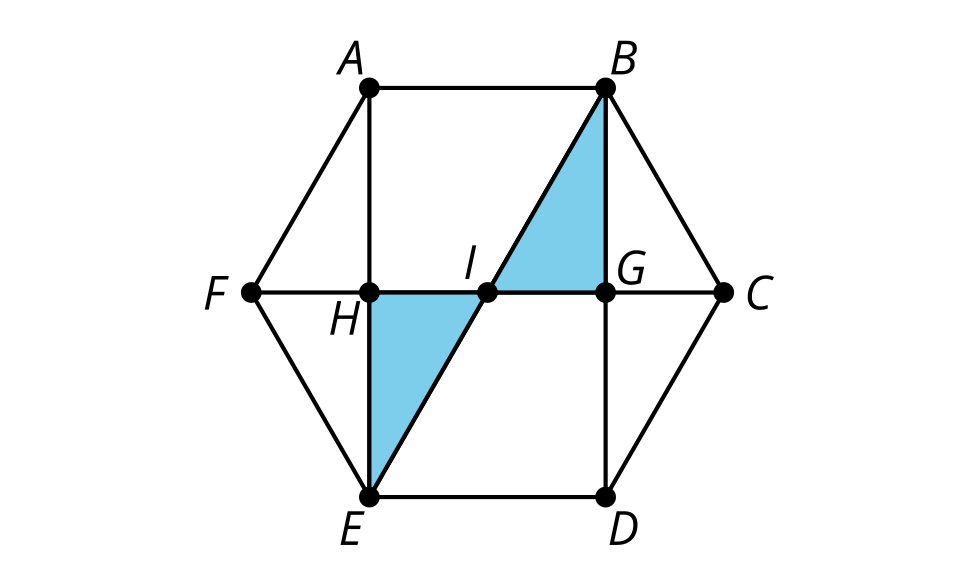
### Lesson 22 Practice Problems

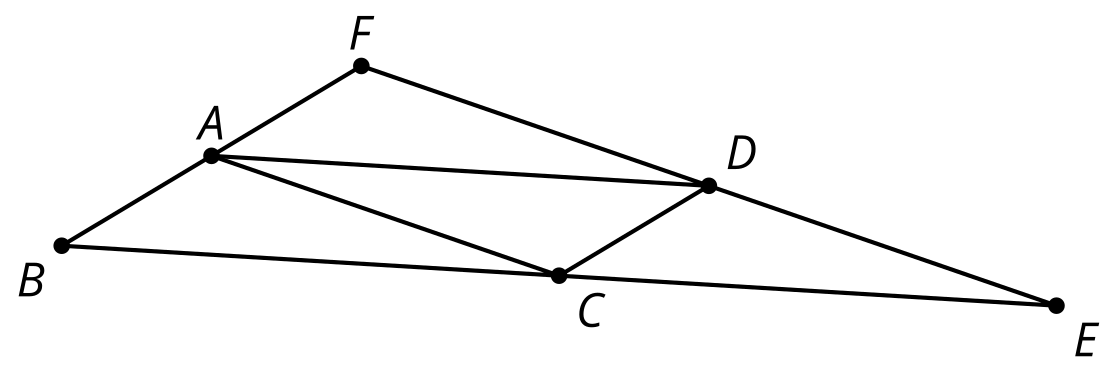
1. This design began from the construction of a regular hexagon. Name 2 pairs of congruent figures.

* 

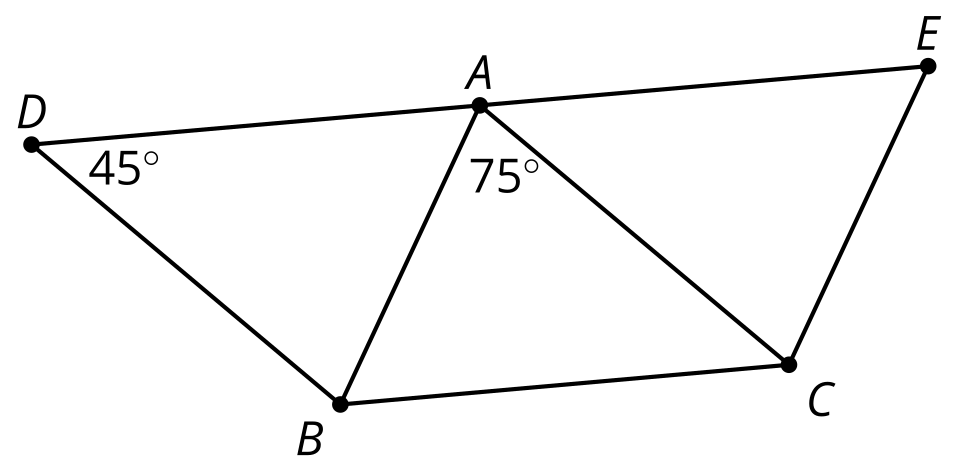
1. This design began from the construction of a regular hexagon. Describe a rigid motion that will take the figure to itself.

* 

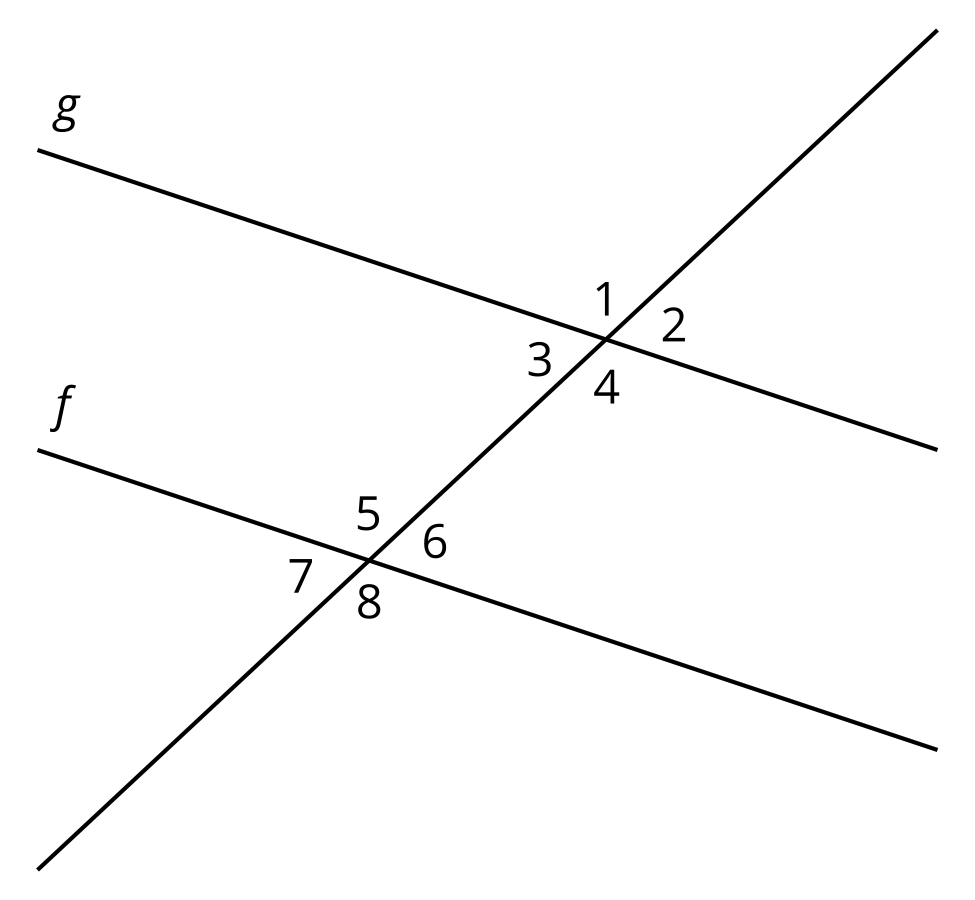
1. Noah starts with triangle  and makes 2 new triangles by translating to and by translating to . Noah thinks that triangle  is congruent to triangle . Do you agree with Noah? Explain your reasoning.

* 
* (From Unit 1, Lesson 21.)

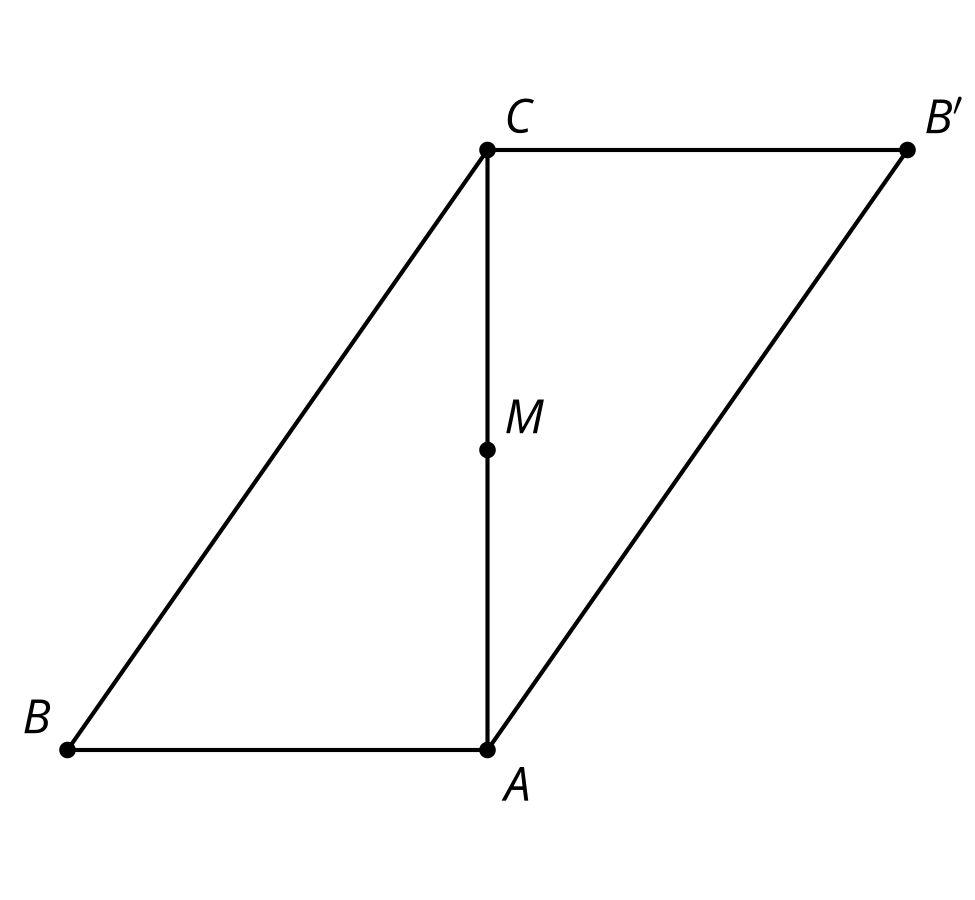
1. In the image, triangle is congruent to triangle and triangle . What are the measures of the 3 angles in triangle ? Show or explain your reasoning.

* 
* (From Unit 1, Lesson 21.)

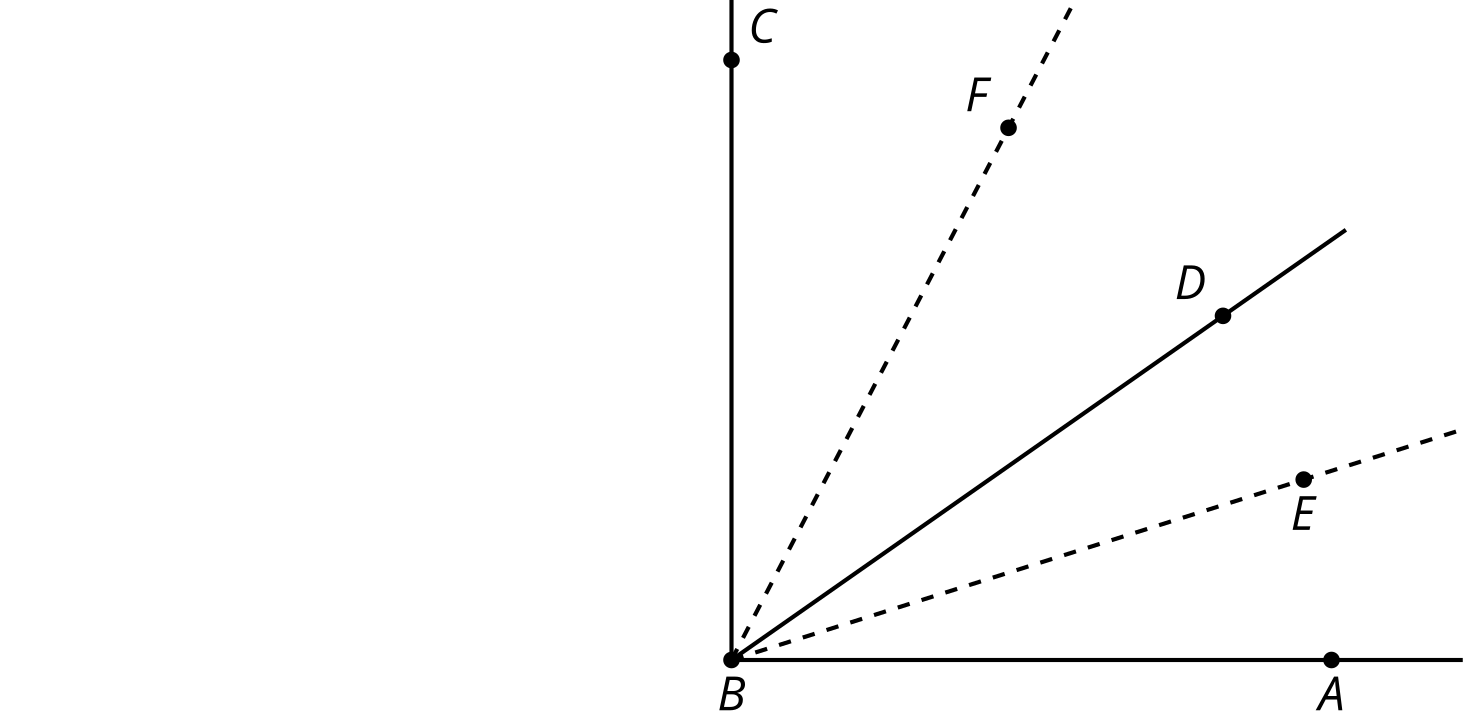
1. In the figure shown, angle 3 is congrent to angle 6. Select **all** statements that *must* be true.

* 
  1. Lines and are parallel.
  2. Angle 2 is congruent to angle 6
  3. Angle 2 and angle 5 are supplementary
  4. Angle 1 is congruent to angle 7
  5. Angle 4 is congruent to angle 6
* (From Unit 1, Lesson 20.)

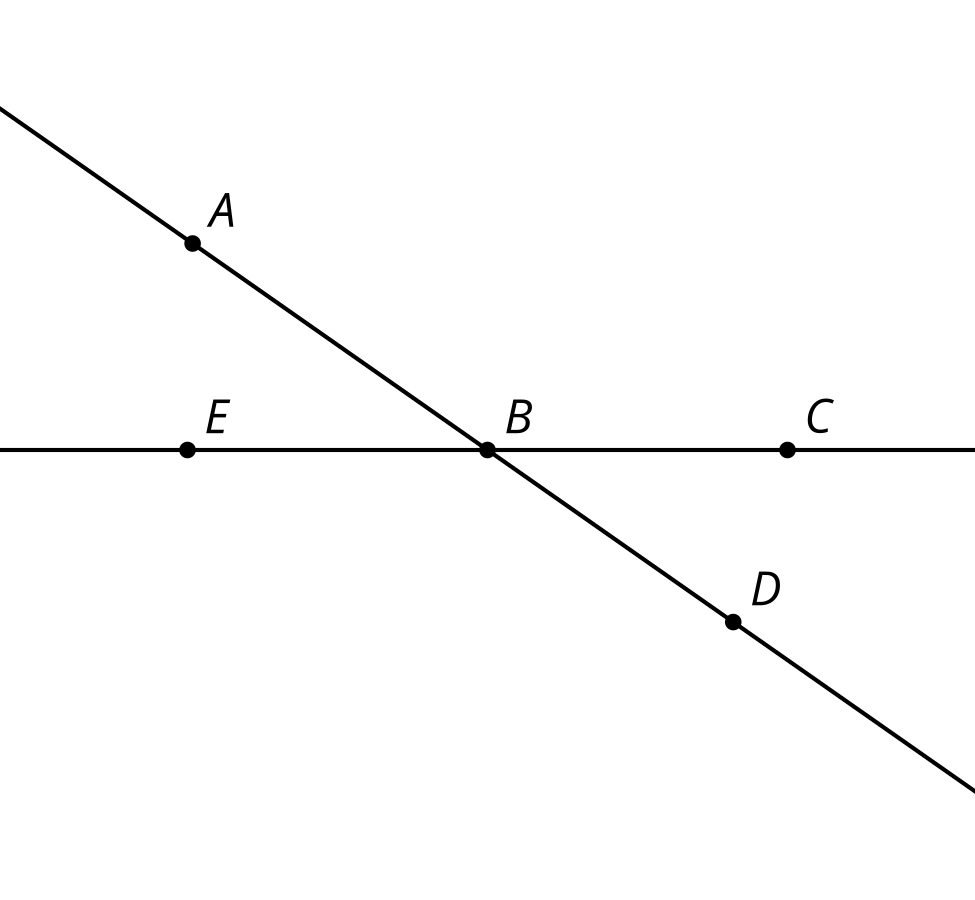
1. In this diagram, point is the midpoint of segment and is the image of by a rotation of around .
   1. Explain why rotating  using center  takes to .
   2. Explain why angles and have the same measure.

* 
* (From Unit 1, Lesson 20.)

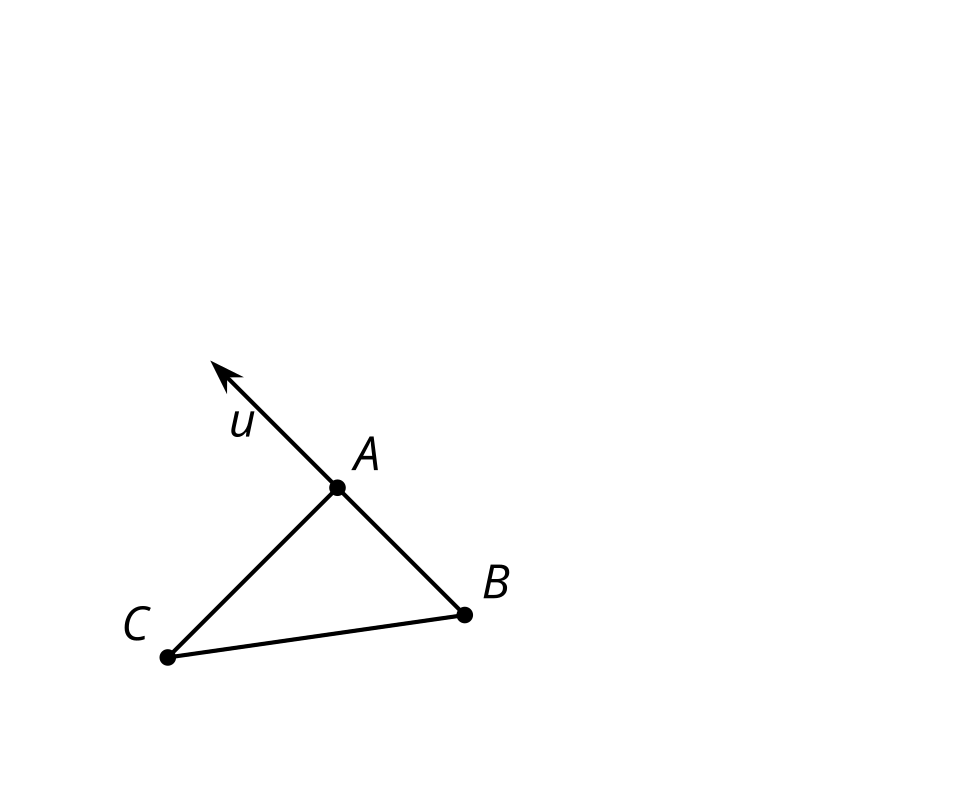
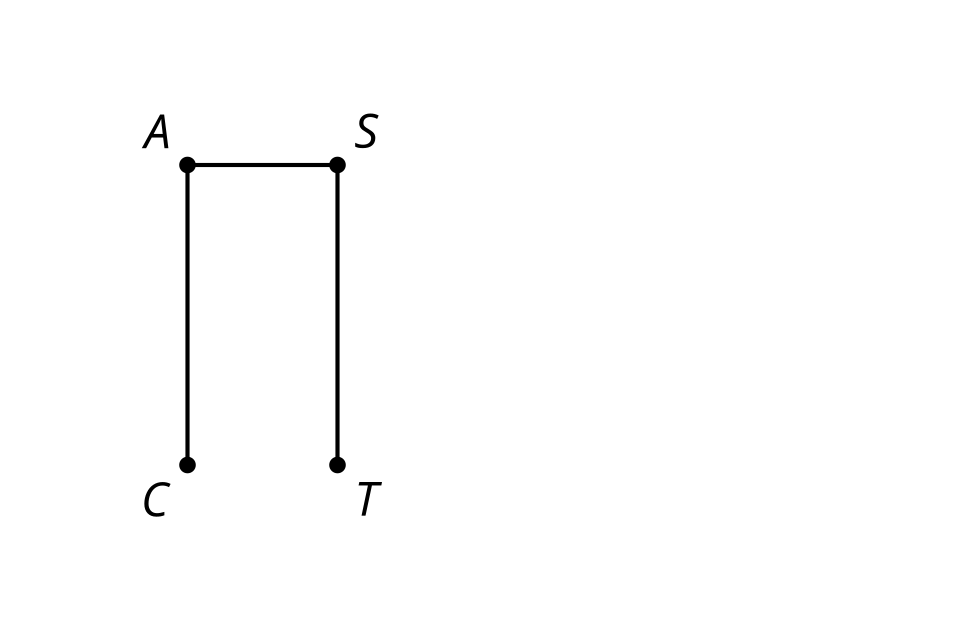
1. Lines and are perpendicular. The dashed rays bisect angles and .

* Select**all** statements that *must*be true:
* 
  1. Angle is congruent to angle
  2. Angle is obtuse
  3. Angle is congruent to angle
  4. Angle is congruent to angle
  5. Angle is 45 degrees
* (From Unit 1, Lesson 19.)

1. Lines and meet at point .

* Give an example of a rotation using an angle greater than 0 degrees and less than 360 degrees, that takes both lines to themselves. Explain why your rotation works.
* 
* (From Unit 1, Lesson 19.)

1. Draw the image of triangle after this sequence of rigid transformations.
   1. Reflect across line segment .
   2. Translate by directed line segment .

* 
* (From Unit 1, Lesson 18.)
  1. Draw the image of figure after a clockwise rotation around point using angle  and then a translation by directed line segment .
  2. Describe another sequence of transformations that will result in the same image.
* 
* (From Unit 1, Lesson 18.)



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