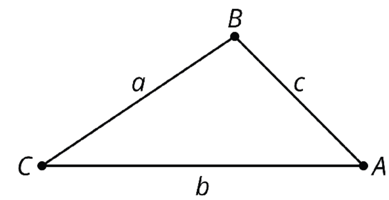
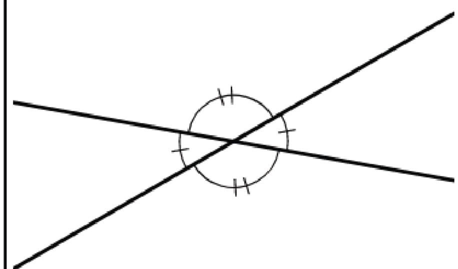
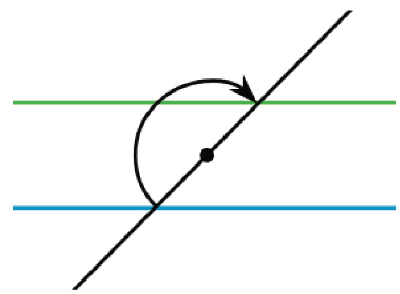
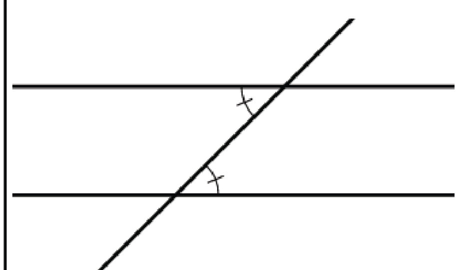
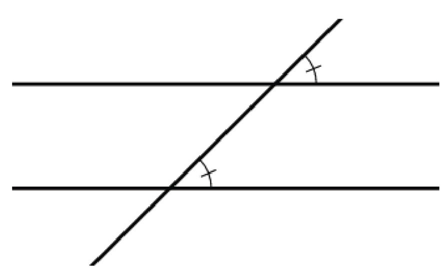
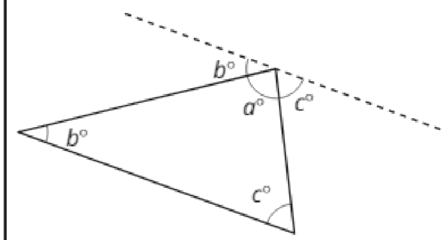
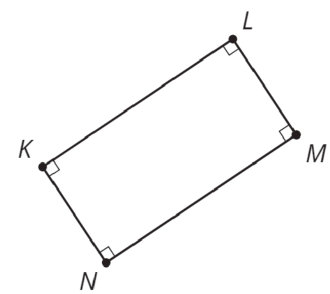
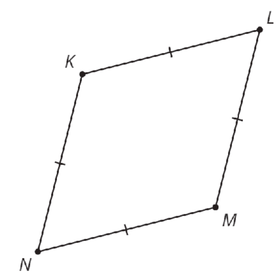
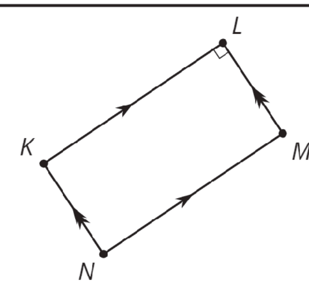
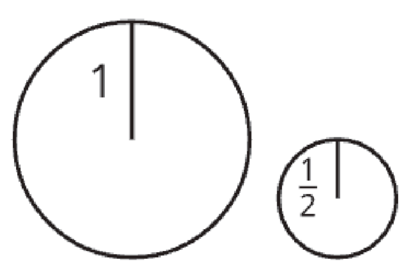
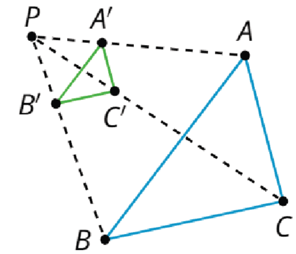
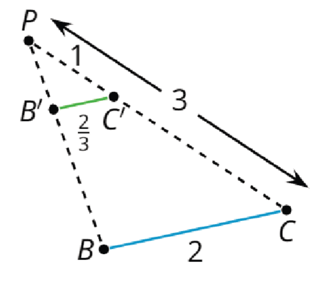
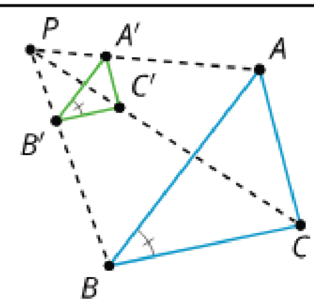
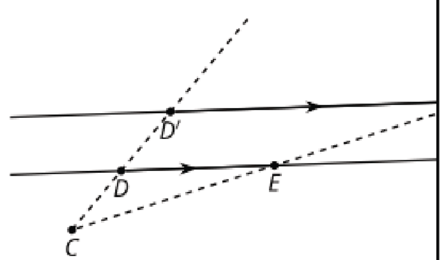
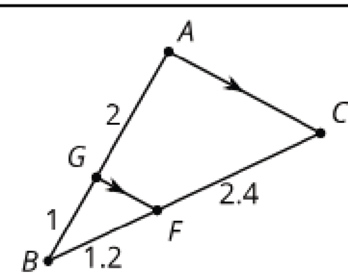
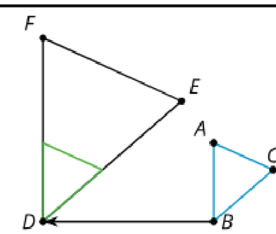
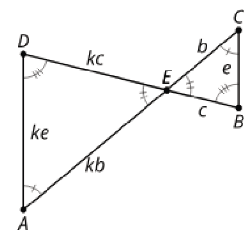
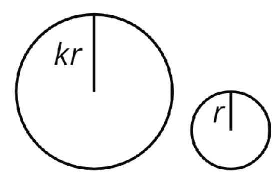
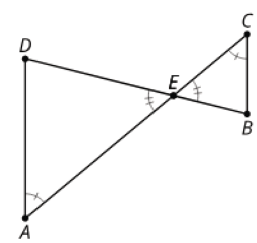
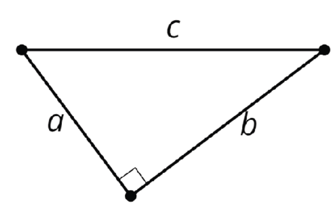
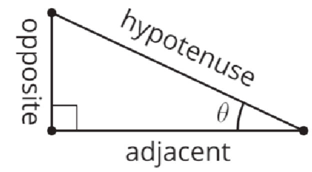
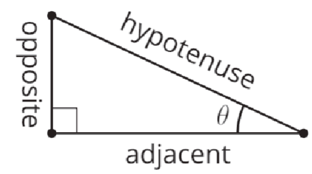
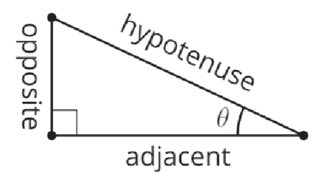
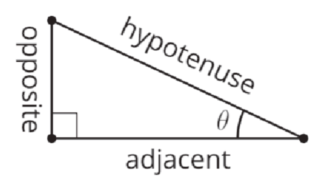
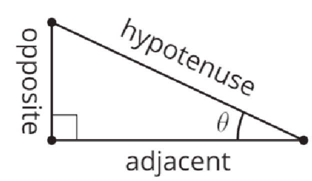
date, type	statement	diagram

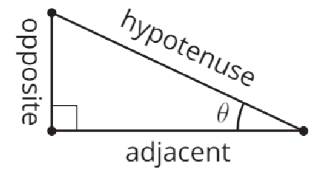
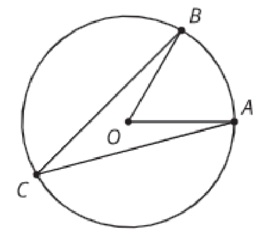
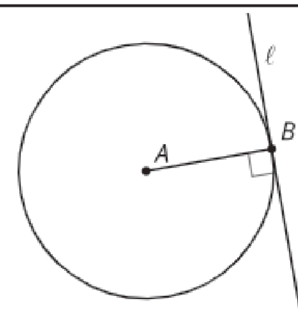
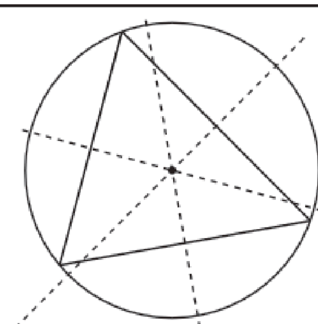
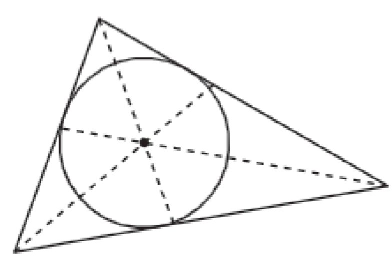
lesson, type	statement	diagram
U1, L3 (students write the date) theorem	**Triangle Inequality Theorem**: If a triangle has side lengths a, b, and c, then $c < a + b$.	
U1, L7 theorem	Vertical angles are congruent.	
U1, L9 assertion	Rotation by 180 degrees takes lines to parallel lines or to themselves.	
U1, L9 theorem	**Alternate Interior Angle Theorem:** If two parallel lines are cut by a transversal, then alternate interior angles are congruent. Conversely, if two lines are cut by a transversal and alternate interior angles are congruent, then the lines have to be parallel.	
U1, L9 theorem	**Corresponding Angle Theorem:** If two parallel lines are cut by a transversal, then corresponding angles are congruent. Conversely, if two lines are cut by a transversal and corresponding angles are congruent, then the lines have to be parallel.	

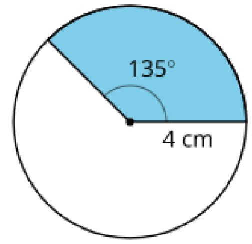
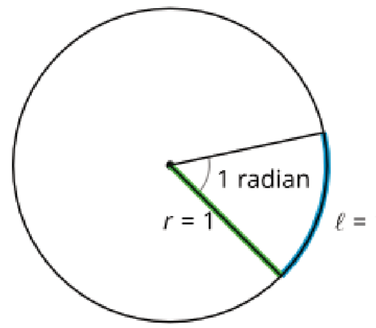
lesson, type	statement	diagram
U1, L10 theorem	**Triangle Angle Sum Theorem:** The three angle measures of any triangle always sum to 180 degrees.	 $a + b + c = 180$
U1, L12 definition	A **rectangle** is a quadrilateral with four right angles.	
U1, L12 definition	A **rhombus** is a quadrilateral with four congruent sides.	
U1, L12 theorem	If a parallelogram has (at least) one right angle, then it is a rectangle.	 *KLMN* has a right angle so it is a rectangle
U2, L1 definition	**Scale factor** is the factor by which every length in an original figure is multiplied when you make a scaled copy.	 Scale factor is 2 or ½

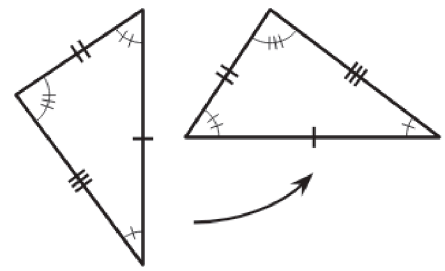
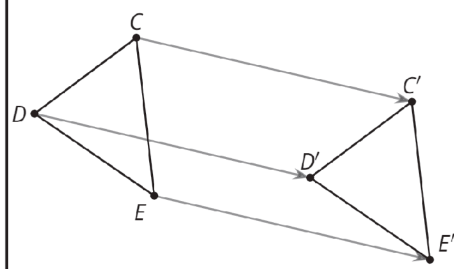
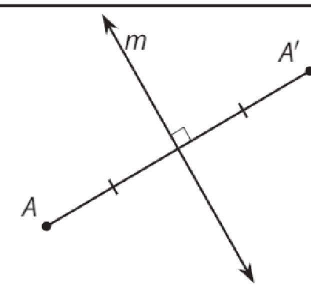
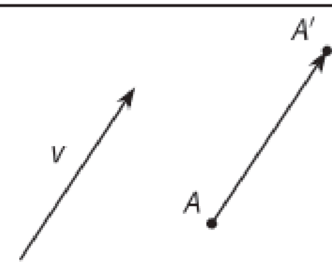
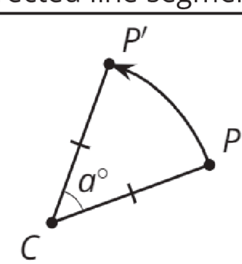
Date, Type	Statement	Diagram
U2, L1 definition	A **dilation** with center *P* and positive scale factor *k* takes a point *A* along the ray *PA* to another point whose distance is *k* times farther away from *P* than *A* is. Dilate <u>(object)</u> using center <u>(point)</u> and a scale factor of <u>(number)</u>.	 *PA′* = *k*•*PA*
U2, L3 assertion	The dilation of a line segment is longer or shorter according to the same ratio given by the scale factor.	 *PC*:*PC′* = 3:1, *BC*:*B′C′* = 2:$\frac{2}{3}$
U2, L4 assertion	If a figure is dilated, then corresponding angles are congruent.	 △$\triangle A'B'C'$ is a dilation of $\triangle ABC$ so ∠*B*≅∠*B′*
U2, L4 theorem	A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.	 Dilate using center *C*. *DE* // *D′E′*
U2, L5 theorem	If a line divides two sides of a triangle proportionally, the line must be parallel to the third side of the triangle.	 $\frac{1}{2} = \frac{1.2}{2.4}$ so *AC* // *GF*

Date, Type	Statement	Diagram
U2, L6 definition	One figure is **similar** to another if there is a sequence of rigid motions and dilations that takes the first figure so that it fits exactly over the second.	 Translation and dilation takes $\triangle ABC$ onto $\triangle FDE$ so $\triangle ABC \sim \triangle FDE$
U2, L7 theorem	If two triangles have all pairs of corresponding angles congruent and all pairs of corresponding side lengths in the same proportion, then the two triangles are similar.	 $\angle A \cong \angle C$, $\angle D \cong \angle B$, $\angle DEA \cong \angle BEC$, $\frac{AD}{CB} = \frac{DE}{BE} = \frac{EA}{EC}$ so $\triangle DEA \sim \triangle BEC$
U2, L8 theorem	All circles are similar.	
U2, L9 theorem	**Angle-Angle Triangle Similarity Theorem:** In two triangles, if two pairs of corresponding angles are congruent, then the triangles must be similar.	 $\angle A \cong \angle C$, $\angle DEA \cong \angle BEC$, so $\triangle DEA \sim \triangle BEC$
U2, L16 theorem	**Pythagorean Theorem:** If a right triangle has legs with lengths a and b and hypotenuse with length c, then $a^2 + b^2 = c^2$.	 $a^2 + b^2 = c^2$

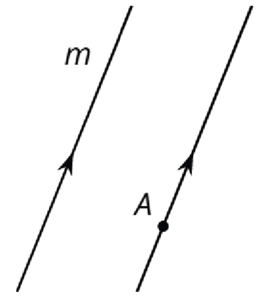
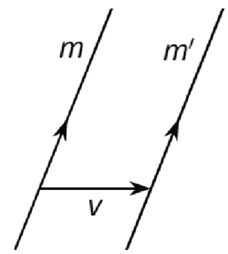
Date, Type	Statement	Diagram
U3, L6 definition	The **cosine** of an acute angle in a right triangle is the ratio (quotient) of the length of the adjacent leg to the length of the hypotenuse.	 $\cos(\theta) = \frac{\text{adjacent}}{\text{hypotenuse}}$
U3, L6 definition	The **sine** of an acute angle in a right triangle is the ratio (quotient) of the length of the opposite leg to the length of the hypotenuse.	 $\sin(\theta) = \frac{\text{opposite}}{\text{hypotenuse}}$
U3, L6 definition	The **tangent** of an acute angle in a right triangle is the ratio (quotient) of the length of the opposite leg to the length of the adjacent leg.	 $\tan(\theta) = \frac{\text{opposite}}{\text{adjacent}}$
U3, L10 definition	The **arccosine** of a number between 0 and 1 is the measure of an acute angle whose cosine is that number.	 $\arccos\left(\frac{\text{adjacent}}{\text{hypotenuse}}\right) = \theta$
U3, L10 definition	The **arcsine** of a number between 0 and 1 is the measure of an acute angle whose sine is that number.	 $\arcsin\left(\frac{\text{opposite}}{\text{hypotenuse}}\right) = \theta$

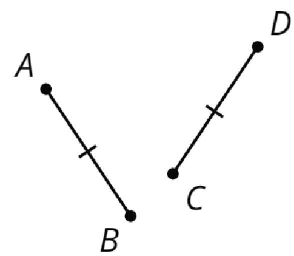
Date, Type	Statement	Diagram
U3, L10 definition	The **arctangent** of a positive number is the measure of an acute angle whose tangent is that number.	 $\arctan\left(\frac{\text{opposite}}{\text{adjacent}}\right) = \theta$
U7, L6 assertion	**Inscribed Angle Theorem:** The measure of an inscribed angle is half the measure of the central angle that defines the same arc.	 $m\angle BCA = \frac{1}{2} m\angle BOA$
U7, L7 theorem	A line is **tangent** to a circle if and only if it is perpendicular to the radius drawn to the point of tangency.	 $\overline{AB} \perp \ell$
U7, L9 theorem	The three perpendicular bisectors of the sides of a triangle meet at a single point, called the triangle's **circumcenter**. This point is the center of the triangle's circumscribed circle.	
U7, L11 theorem	The three angle bisectors of a triangle meet at a single point, called the triangle's **incenter**. This point is the center of the triangle's inscribed circle.	

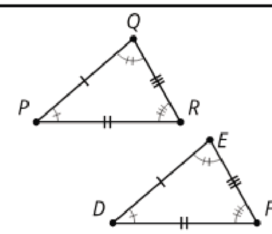
Date, Type	Statement	Diagram
U7, L12 theorem	To calculate the **area of a sector** or the **length of an arc**, first find the fraction of the circle represented by the central angle of the arc or sector. Multiply this fraction by the circle's area or circumference.	 arc length: 3π cm sector area: 6π cm^2
U7, L15 definition	For any angle, imagine drawing a circle with the angle's vertex at its center. Then, the "**radian** measure of the angle" is the ratio of the length of the arc defined by the angle to the circle's radius. That is, $\theta = \frac{arc\ length}{radius}$.	

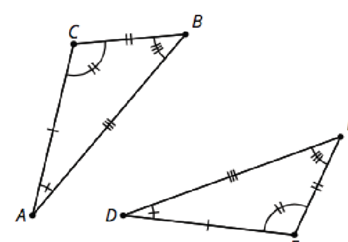
type, number	**statement**	**diagram**
Assertion 1	A **rigid transformation** is a translation, reflection, rotation, or any sequence of the three. Rigid transformations take lines to lines, angles to angles of the same measure, and segments to segments of the same length.	
Definition 2	One figure is **congruent** to another if there is a sequence of translations, rotations, and reflections that takes the first figure exactly onto the second figure. The second figure is called the image of the rigid transformation.	 $\triangle EDC \cong \triangle E'D'C'$
Definition 3	**Reflection** is a rigid transformation that takes a point to another point that is the same distance from the given line, is on the other side of the given line, and so that the segment from the original point to the image is perpendicular to the given line. "Reflect (object) across line (name)."	 Reflect *A* across line *m*.
Definition 4	**Translation** is a rigid transformation that takes a point to another point so that the directed line segment from the original point to the image is parallel to the given line segment and has the same length and direction. "Translate (object) by the directed line segment (name or from [point] to [point])."	 Translate *A* by the directed line segment *v*.
Definition 5	**Rotation** is a rigid transformation that takes a point to another point on the circle through the original point with the given center. The two radii to the original point and the image make the given angle. "Rotate (object) (clockwise or counterclockwise) by (angle or angle measure) using center (point)."	 Rotate *P* counterclockwise by $a°$ using center *C*.

1

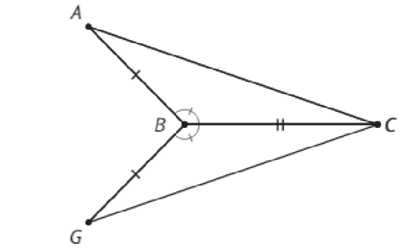
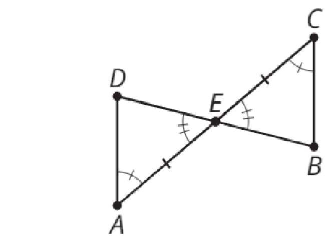
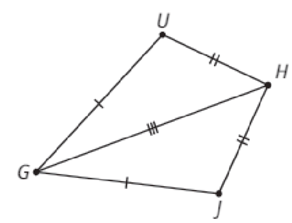
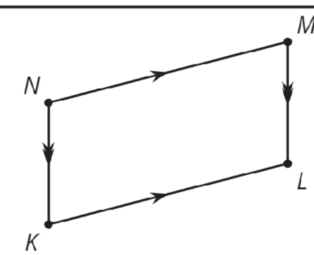
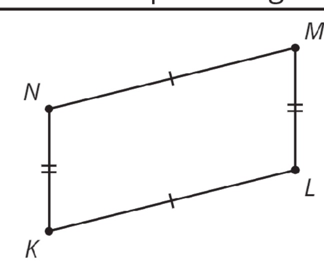
<table>
<tr><th>type, number</th><th>statement</th><th>diagram</th></tr>
<tr><td>Assertion 6</td><td>Parallel Postulate: Given a line m and a point A that is not on m, there is exactly one line that goes through A that is parallel to m.</td><td>
</td></tr>
<tr><td>Theorem 7</td><td>Translations take lines to parallel lines or to themselves.</td><td>

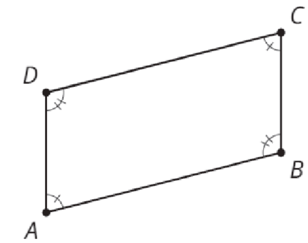
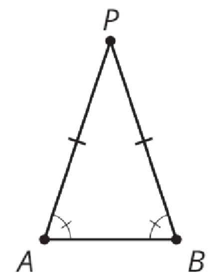
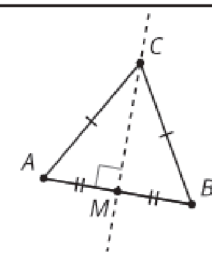
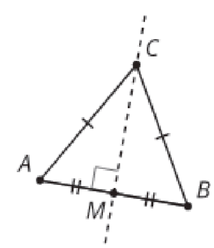
$m \parallel m'$</td></tr>
<tr><td>Theorem 8</td><td>If two segments have the same length, then they are congruent.</td><td>

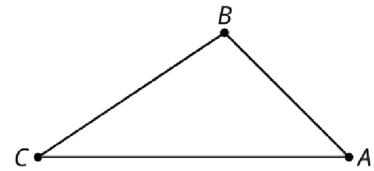
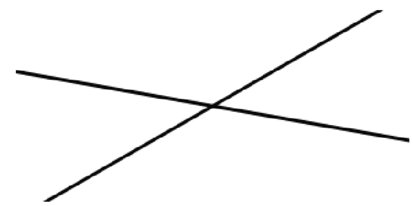
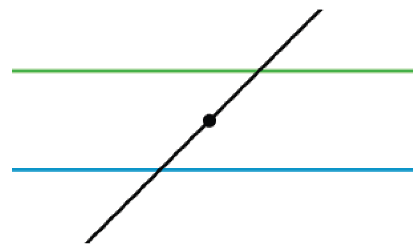
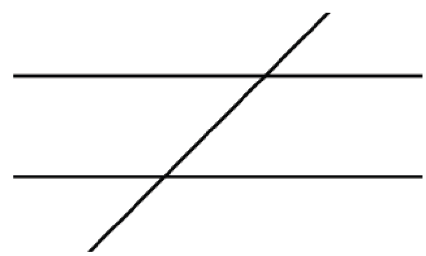
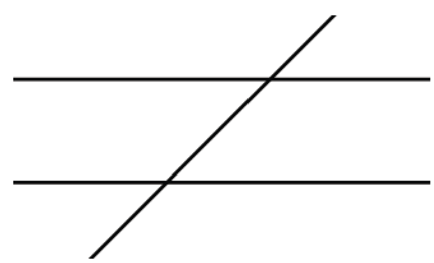
$AB=CD$, so $\overline{AB} \cong \overline{CD}$</td></tr>
<tr><td>Theorem 9</td><td>If two figures are congruent, then corresponding parts of those figures must be congruent</td><td>

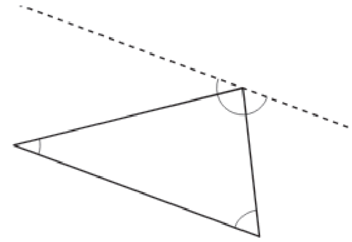
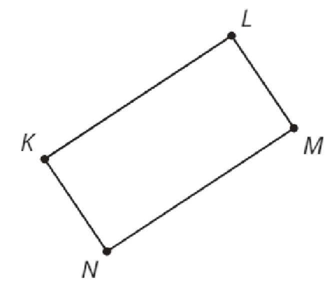
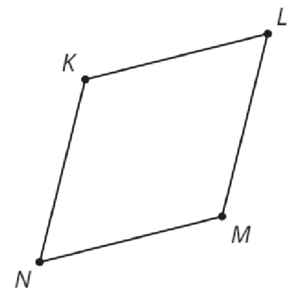
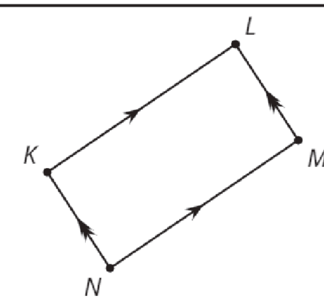
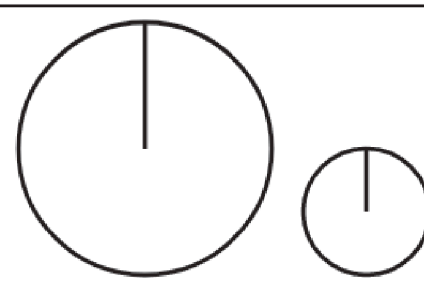
$\triangle PQR \cong \triangle DEF$ so $PQ=DE$, $PR=DF$, $QR=EF$, $\angle P \cong \angle D$, $\angle Q \cong \angle E$, $\angle R \cong \angle F$</td></tr>
<tr><td>Theorem 10</td><td>If all pairs of corresponding sides and all pairs of corresponding angles are congruent, then the triangles must be congruent.</td><td>

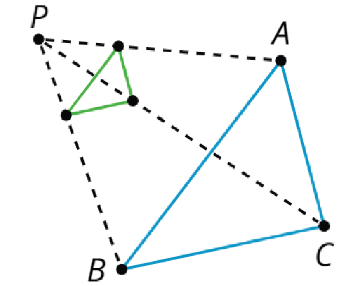
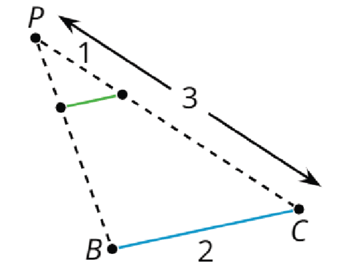
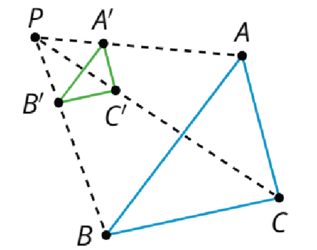
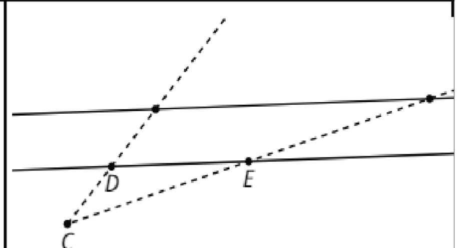
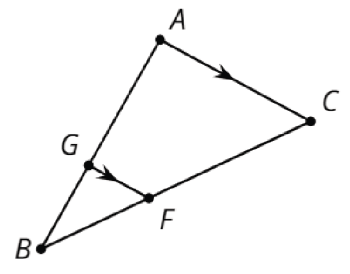
$AB=DE$, $BC=EF$, $CA=FD$, $\angle B \cong \angle E$, $\angle A \cong \angle D$, $\angle C \cong \angle F$ so $\triangle ABC \cong \triangle DEF$</td></tr>
</table>

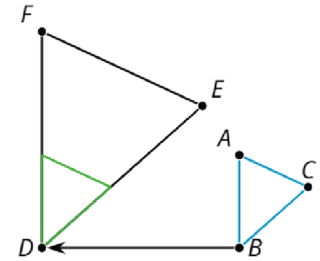
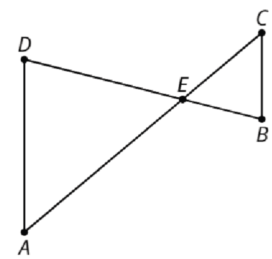
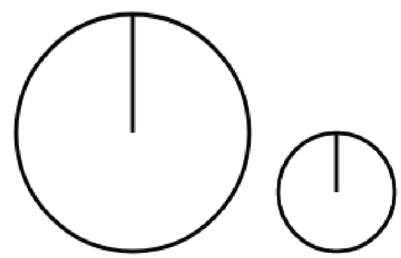
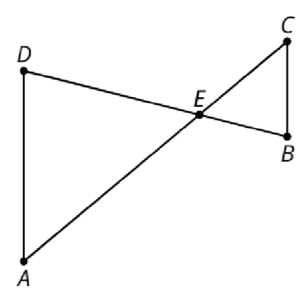
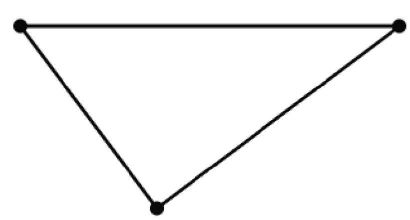
type, number	statement	diagram
Theorem 11	**Side-Angle-Side Triangle Congruence Theorem:** In two triangles, if two pairs of congruent corresponding sides and the pair of corresponding angles between the sides are congruent, then the two triangles are congruent.	 $AB=GB$, $BC=BC$, $\angle ABC \cong \angle GBC$ so $\triangle ABC \cong \triangle GBC$
Theorem 12	**Angle-Side-Angle Triangle Congruence Theorem:** In two triangles, if two pairs of corresponding angles, and the pair of corresponding sides between the angles, are congruent, then the triangles must be congruent.	 $\angle A \cong \angle C$, $AE=EC$, $\angle DEA \cong \angle BEC$, so $\triangle DEA \cong \triangle BEC$
Theorem 13	**Side-Side-Side Triangle Congruence Theorem:** In two triangles, if all three pairs of corresponding sides are congruent, then the triangles must be congruent.	 $HU=HJ$, $UG=JG$, $HG=HG$ so $\triangle HUG \cong \triangle HJG$
Definition 14	A **parallelogram** is a quadrilateral with two pairs of opposite sides parallel.	 $NM \parallel KL$, $NK \parallel ML$, so $MNKL$ is a parallelogram
Theorem 15	In a parallelogram, pairs of opposite sides are congruent.	 $MNKL$ is a parallelogram, so $NM=KL$, $NK=ML$

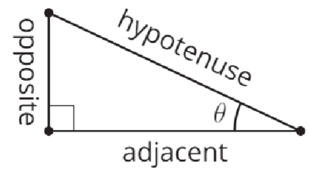
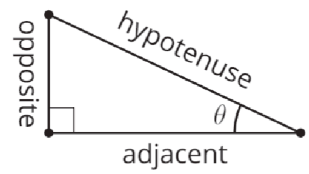
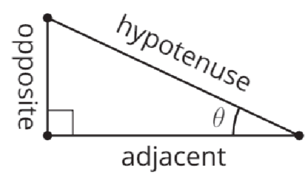
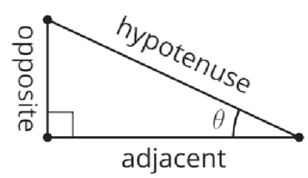
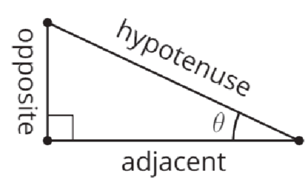
type, number	**statement**	**diagram**
Theorem 16	In a parallelogram, opposite angles are congruent.	 *ABCD* is a parallelogram, so $\angle A \cong \angle C$, $\angle D \cong \angle B$
Theorem 17	**Isosceles Triangle Theorem:** In an isosceles triangle, the base angles are congruent.	 $AP=PB$ so $\angle A \cong \angle B$
Theorem 18	If a point *C* is the same distance from *A* as it is from *B*, then *C* must be on the perpendicular bisector of *AB*.	 $AC=BC$, *M* is the midpoint, so $MC \perp AB$
Theorem 19	If *C* is a point on the perpendicular bisector of segment *AB*, the distance from *C* to *A* is the same as the distance from *C* to *B*.	 $AB \perp CM$, $AM=BM$, so $AC=BC$

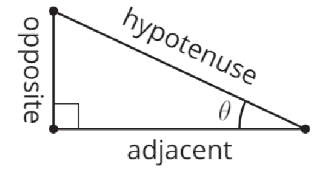
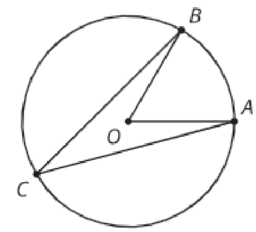
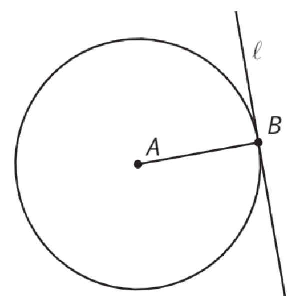
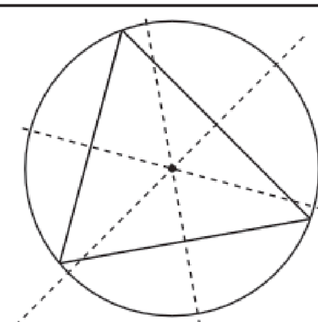
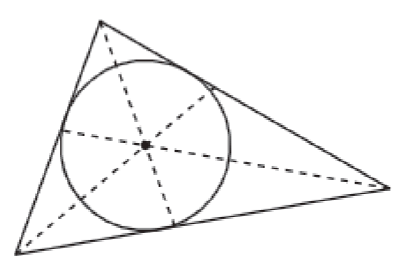
date, type	statement	diagram
theorem	If a triangle has side lengths ______________, ______________, and ______________, then ______________.	
theorem	______________ angles are ______________.	
assertion	______________ by ______________ takes lines to ______________ lines or to ______________.	
theorem	____________________________ **Angle Theorem:** If two ______________ lines are cut by a ______________, then alternate interior angles are ______________. Conversely, if two lines are cut by a ______________ and alternate interior angles are ______________, then the lines have to be ______________.	
theorem	__________________ **Angle Theorem:** If two ______________ lines are cut by a ______________, then corresponding angles are ______________. Conversely, if two ______________ are cut by a ______________ and corresponding angles are congruent, then the lines have to be ______________.	

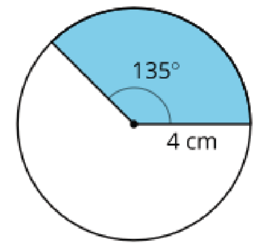
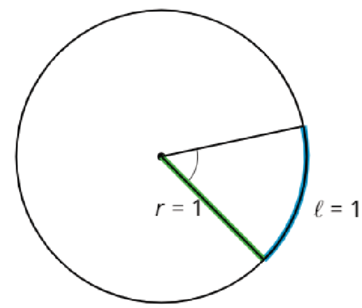
lesson, type	**statement**	**diagram**
theorem	**Triangle ______________________________ Theorem:** The three ______________ measures of any ______________ always sum to _____ degrees.	
definition	A ______________ is a quadrilateral with four ______________________________.	
definition	A ______________ is a quadrilateral with four ______________ sides.	
theorem	If a ______________ has (at least) one __________________, then it is a ______________.	
definition	______________________________ is the factor by which every ______________ in an original figure is ______________ when you make a ______________ copy.	

date, type	**statement**	**diagram**
definition	A ______________ with center P and positive ____________________________ k takes a point A along the ______________ PA to another point whose ______________ is k times further away from P than _____ is. Dilate _(object)_ using center _(point)_ and a scale factor of _(number)_.	
assertion	The ______________ of a line segment is ______________ or shorter according to the same ______________ given by the ____________________________.	
assertion	If a figure is ______________, then corresponding ______________ are ______________.	
theorem	A ______________ takes a line not passing through the ______________ of the dilation to a ______________ line, and leaves a line passing through the ______________ unchanged.	
theorem	If a line divides two ______________ of a triangle proportionally, the ______________ must be ______________ to the ____________________________ of the triangle.	

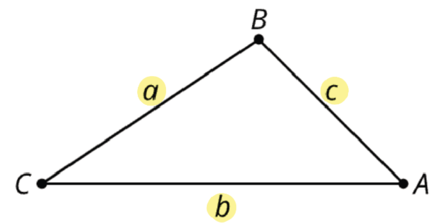
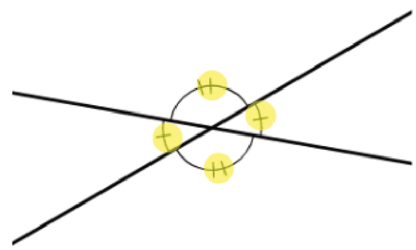
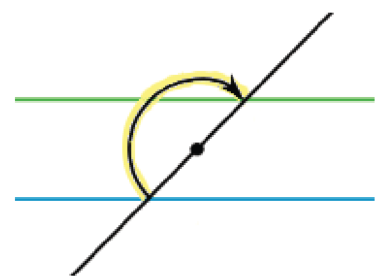
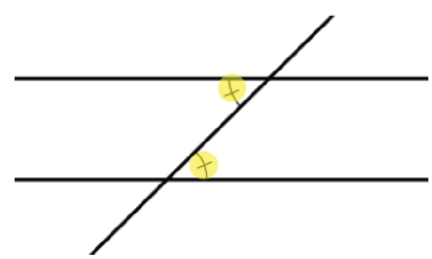
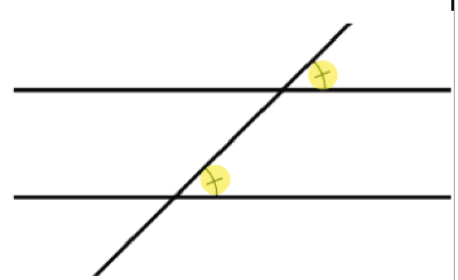
date, type	statement	diagram
definition	One figure is ______________ to another if there is a sequence of ____________________________ and ______________ that takes the first figure so that it fits ______________ over the second.	
theorem	If two ______________ have all pairs of corresponding ______________ congruent, and all pairs of corresponding ____________________________ in the same proportion, then the two triangles are ______________.	 $\angle A \cong \angle C$, $\angle D \cong \angle B$, $\angle DEA \cong \angle BEC$, $\frac{AD}{CB} = \frac{DE}{BE} = \frac{EA}{EC}$ so
theorem	All ____.	
theorem	____________________________ **Triangle Similarity Theorem:** In two ______________, if ______________ pairs of corresponding ______________ are congruent, then the triangles must be ______________.	
theorem	______________ **Theorem:** If a ______________ triangle has ______________ with lengths _____ and _____ and hypotenuse with length c, then _____________.	

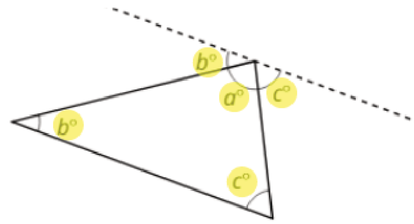
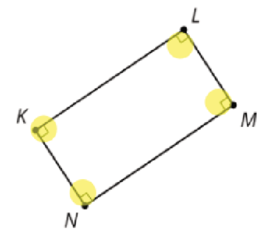
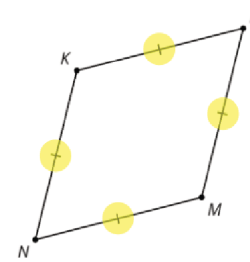
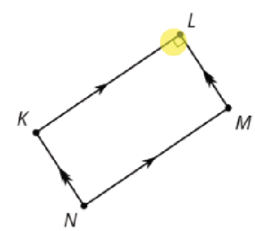
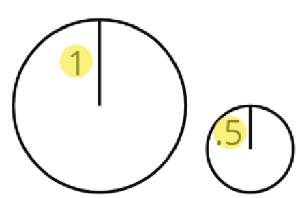
date, type	**statement**	**diagram**
definition	The ______________ of an acute angle in a ______________ triangle is the ratio (quotient) of the length of the ______________ leg to the length of the ______________.	
definition	The ______________ of an acute angle in a ______________ triangle is the ratio (quotient) of the length of the ______________ leg to the length of the ______________.	
definition	The ______________ of an acute angle in a ______________ triangle is the ratio (quotient) of the length of the ______________ leg to the length of the ______________ leg.	
definition	The ______________ of a number between _____ and _____ is the measure of an acute ______________ whose ______________ is that number.	
definition	The ______________ of a number between _____ and _____ is the measure of an acute ______________ whose ______________ is that number.	

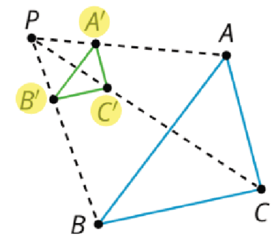
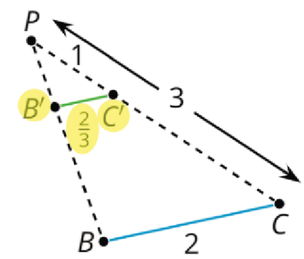
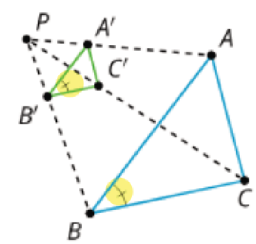
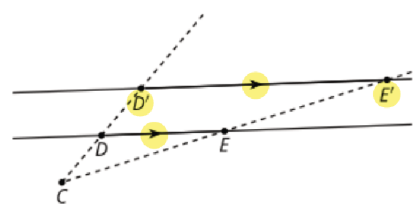
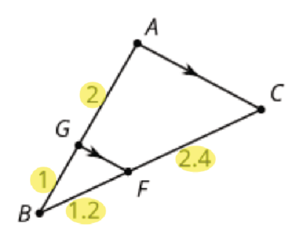
date, type	statement	diagram
definition	The ______________ of a positive number is the measure of an acute ______________ whose ______________ is that number.	
assertion	______________ **Angle Theorem**: The measure of an ______________ angle is ______________ the measure of the ______________ angle that defines the same arc.	
theorem	A ______________ is ______________ to a ______________ if and only if it is ______________ to the radius drawn to the point of ______________.	
theorem	The three ____________________________ of the sides of a triangle meet at a single ______________, called the triangle's ________________. This point is the ______________ of the triangle's ____________________________.	
theorem	The three ____________________________ of a triangle meet at a single ______________, called the triangle's ______________. This point is the ______________ of the triangle's ____________________________.	

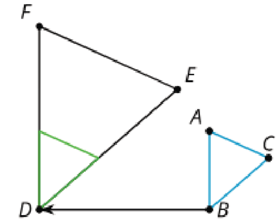
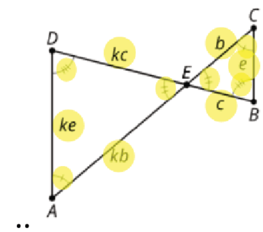
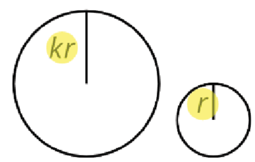
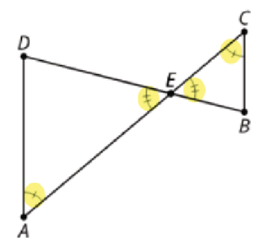
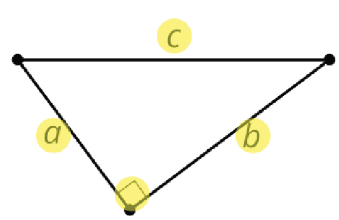
date, type	statement	diagram
theorem	To calculate the ______________ of a ______________ or the ______________ of an ______________, first find the fraction of the circle represented by the central angle of the arc or sector. Multiply this ______________ by the circle's ______________ or ______________.	
definition	For any ______________, imagine drawing a ______________ with the angle's vertex at its ______________. Then, the "______________ measure of the angle" is the ratio of the length of the arc defined by the angle to the circle's radius. That is, ______________	

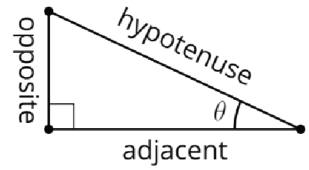
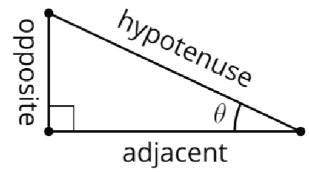
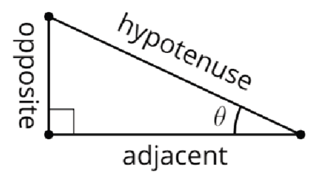
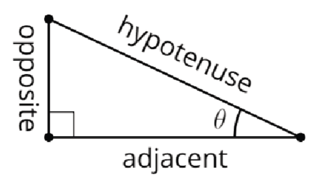
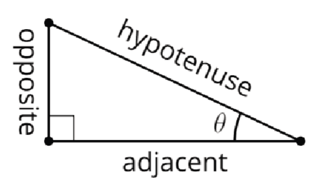
x

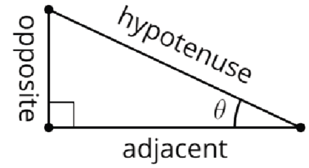
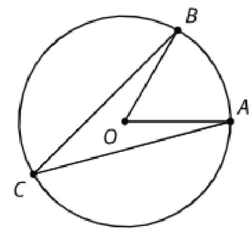
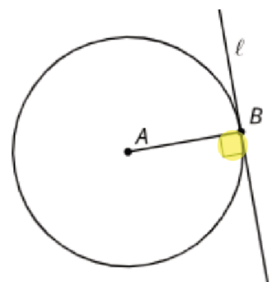
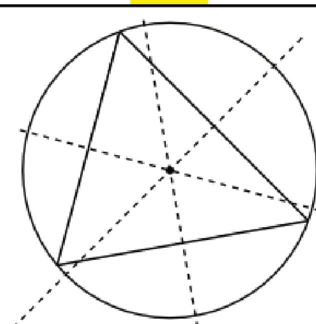
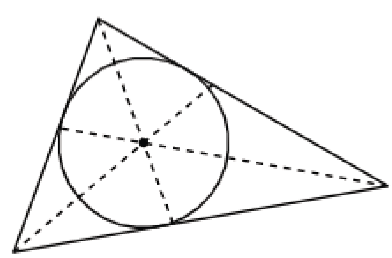
lesson, type	statement	diagram
U1, L3 (students write the date) theorem	If a triangle has side lengths a, b, and c, then $c < a + b$.	
U1, L7 theorem	Vertical angles are congruent.	
U1, L9 assertion	Rotation by 180 degrees takes lines to parallel lines or to themselves.	
U1, L9 theorem	**Alternate Interior Angle Theorem:** If two parallel lines are cut by a transversal, then alternate interior angles are congruent. Conversely, if two lines are cut by a transversal and alternate interior angles are congruent, then the lines have to be parallel.	
U1, L9 theorem	**Corresponding Angle Theorem:** If two parallel lines are cut by a transversal, then corresponding angles are congruent. Conversely, if two lines are cut by a transversal and corresponding angles are congruent, then the lines have to be parallel.	

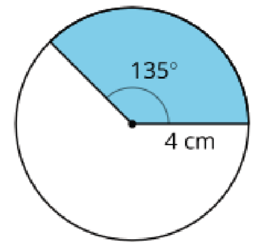
lesson, type	statement	diagram
U1, L10 theorem	**Triangle Angle Sum Theorem:** The three angle measures of any triangle always sum to 180 degrees.	 $a + b + c = 180$
U1, L12 definition	A **rectangle** is a quadrilateral with four right angles.	
U1, L12 definition	A **rhombus** is a quadrilateral with four congruent sides.	
U1, L12 theorem	If a parallelogram has (at least) one right angle, then it is a rectangle.	 *KLMN* has a right angle so it is a rectangle
U2, L1 definition	**Scale factor** is the factor by which every length in an original figure is multiplied when you make a scaled copy.	 Scale factor is 2 or ½

Date, Type	Statement	Diagram
U2, L1 definition	A **dilation** with center *P* and positive scale factor *k* takes a point *A* along the ray *PA* to another point whose distance is *k* times further away from *P* than *A* is. Dilate _(object)_ using center _(point)_ and a scale factor of _(number)_.	 *PA′* = *k*•*PA*
U2, L3 assertion	The dilation of a line segment is longer or shorter according to the same ratio given by the scale factor.	 *PC*:*PC′* = 3:1, *BC*:*B′C′* = 2:$\frac{2}{3}$
U2, L4 assertion	If a figure is dilated, then corresponding angles are congruent.	 $\triangle A'B'C'$ is a dilation of $\triangle ABC$ so $\angle B \cong \angle B'$
U2, L4 theorem	A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.	 Dilate using center *C*. *DE* // *D′E′*
U2, L5 theorem	If a line divides two sides of a triangle proportionally, the line must be parallel to the third side of the triangle.	 $\frac{1}{2} = \frac{1.2}{2.4}$ so *AC* // *GF*

Date, Type	Statement	Diagram
U2, L6 definition	One figure is **similar** to another if there is a sequence of rigid motions and dilations that takes the first figure so that it fits exactly over the second.	 Translation and dilation takes $\triangle ABC$ onto $\triangle FDE$ so $\triangle ABC \sim \triangle FDE$
U2, L7 theorem	If two triangles have all pairs of corresponding angles congruent and all pairs of corresponding side lengths in the same proportion, then the two triangles are similar.	 $\angle A \cong \angle C$, $\angle D \cong \angle B$, $\angle DEA \cong \angle BEC$, $\frac{AD}{CB} = \frac{DE}{BE} = \frac{EA}{EC}$ so $\triangle DEA \sim \triangle BEC$
U2, L8 theorem	All circles are similar.	
U2, L9 theorem	**Angle-Angle Triangle Similarity Theorem:** In two triangles, if two pairs of corresponding angles are congruent, then the triangles must be similar.	 $\angle A \cong \angle C$, $\angle DEA \cong \angle BEC$, so $\triangle DEA \sim \triangle BEC$
U2, L16 theorem	**Pythagorean Theorem:** If a right triangle has legs with lengths a and b and hypotenuse with length c, then $a^2 + b^2 = c^2$.	 $a^2 + b^2 = c^2$

Date, Type	Statement	Diagram
U3, L6 definition	The **cosine** of an acute angle in a right triangle is the ratio (quotient) of the length of the adjacent leg to the length of the hypotenuse.	 $\cos(\theta) = \frac{\text{adjacent}}{\text{hypotenuse}}$
U3, L6 definition	The **sine** of an acute angle in a right triangle is the ratio (quotient) of the length of the opposite leg to the length of the hypotenuse.	 $\sin(\theta) = \frac{\text{opposite}}{\text{hypotenuse}}$
U3, L6 definition	The **tangent** of an acute angle in a right triangle is the ratio (quotient) of the length of the opposite leg to the length of the adjacent leg.	 $\tan(\theta) = \frac{\text{opposite}}{\text{adjacent}}$
U3, L10 definition	The **arccosine** of a number between 0 and 1 is the measure of an acute angle whose cosine is that number.	 $\arccos\left(\frac{\text{adjacent}}{\text{hypotenuse}}\right) = \theta$
U3, L10 definition	The **arcsine** of a number between 0 and 1 is the measure of an acute angle whose sine is that number.	 $\arcsin\left(\frac{\text{opposite}}{\text{hypotenuse}}\right) = \theta$

Date, Type	Statement	Diagram
U3, L10 definition	The **arctangent** of a positive number is the measure of an acute angle whose tangent is that number.	 $\arctan\left(\frac{\text{opposite}}{\text{adjacent}}\right) = \theta$
U7, L6 assertion	**Inscribed Angle Theorem:** The measure of an inscribed angle is half the measure of the central angle that defines the same arc.	 $m\angle BCA = \frac{1}{2} m\angle BOA$
U7, L7 theorem	A line is tangent to a circle if and only if it is perpendicular to the radius drawn to the point of tangency.	 $\overline{AB} \perp \ell$
U7, L9 theorem	The three perpendicular bisectors of the sides of a triangle meet at a single point, called the triangle's **circumcenter**. This point is the center of the triangle's circumscribed circle.	
U7, L11 theorem	The three angle bisectors of a triangle meet at a single point, called the triangle's **incenter**. This point is the center of the triangle's inscribed circle.	

Date, Type	Statement	Diagram
U7, L12 theorem	To calculate the area of a sector or the length of an arc, first find the fraction of the circle represented by the central angle of the arc or sector. Multiply this fraction by the circle's area or circumference.	 arc length: 3π cm sector area: 6π cm^2
U7, L15 definition	For any angle, imagine drawing a circle with the angle's vertex at its center. Then, the "**radian** measure of the angle" is the ratio of the length of the arc defined by the angle to the circle's radius. That is, $\theta = \frac{arc\ length}{radius}$.