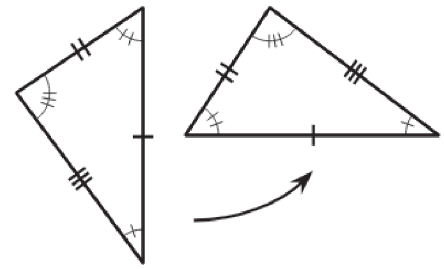
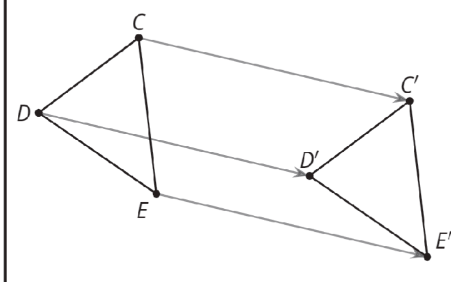
date, type	statement	diagram

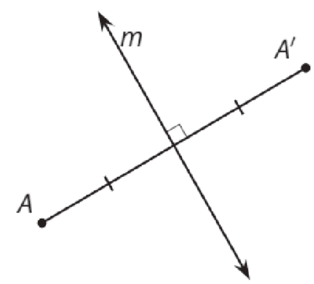
<table>
<tr><th>lesson, type</th><th>statement</th><th>diagram</th></tr>
<tr><td>U1, L10

(students write the date)

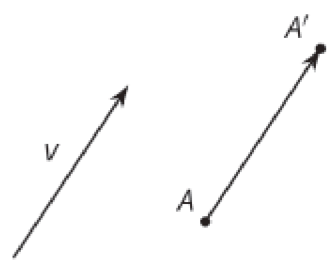
assertion</td><td>A rigid transformation is a translation, reflection, rotation, or any sequence of the three.
Rigid transformations take lines to lines, angles to angles of the same measure, and segments to segments of the same length.</td><td></td></tr>
<tr><td>U1, L10

definition</td><td>Two figures are congruent if there is a sequence of translations, rotations, and reflections that takes one figure exactly onto the other.
The second figure is called the image of the rigid transformation.</td><td>

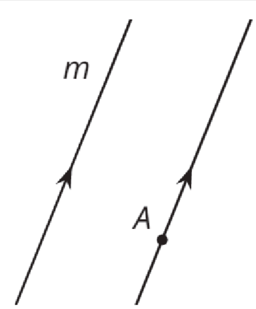
$\triangle EDC \cong \triangle E'D'C'$</td></tr>
<tr><td>U1, L11

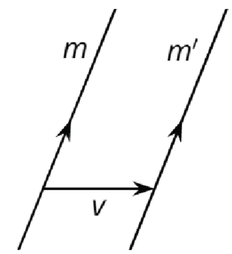
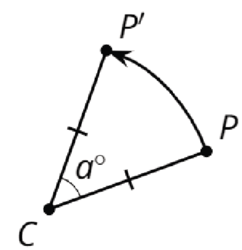
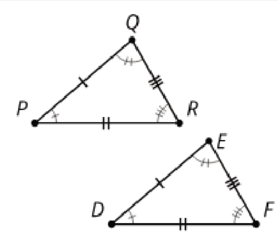
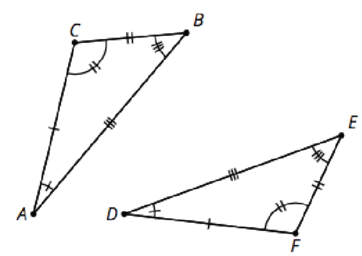
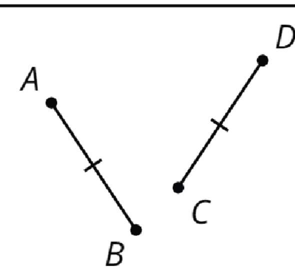
definition</td><td>Reflection is a rigid transformation that takes a point to another point that is the same distance from the given line, that is on the other side of the given line, and so that the segment from the original point to the image is perpendicular to the given line.
“Reflect <u>(object)</u> across line <u>(name)</u>.”</td><td>

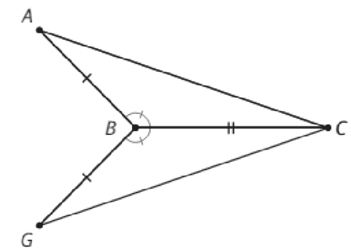
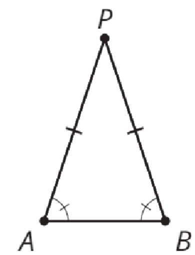
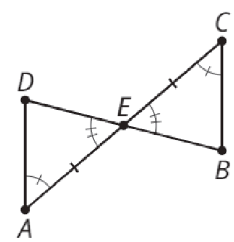
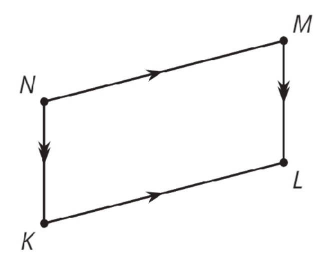
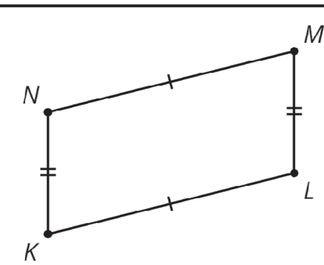
Reflect A across line m.</td></tr>
<tr><td>U1, L12

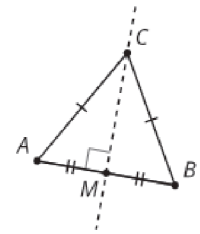
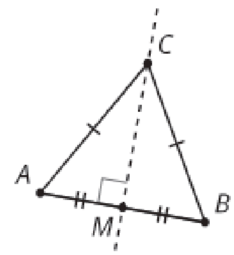
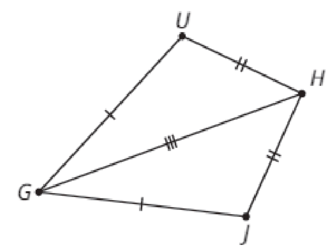
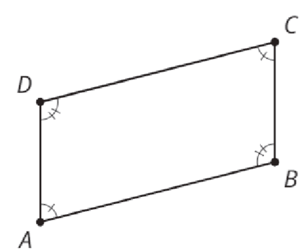
definition</td><td>Translation is a rigid transformation that takes a point to another point so that the directed line segment from the original point to the image is parallel to the given line segment and has the same length and direction.
“Translate <u>(object)</u> by the directed line segment <u>(name or from [point] to [point])</u>.”</td><td>

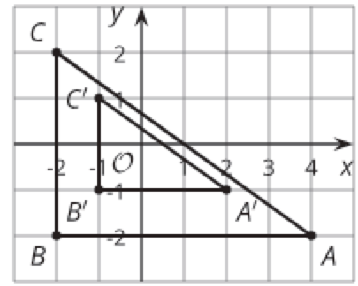
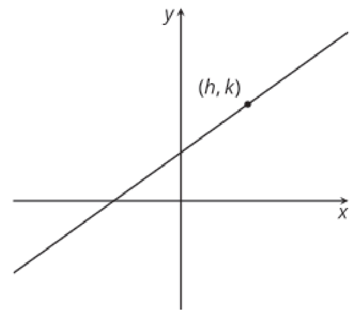
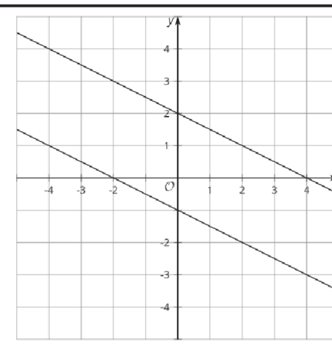
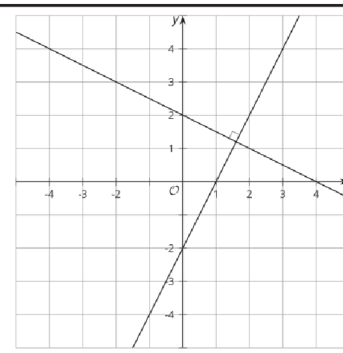
Translate A by the directed line segment v.</td></tr>
<tr><td>U1, L12

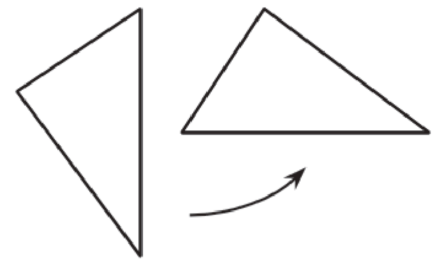
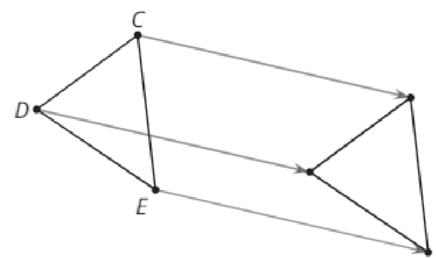
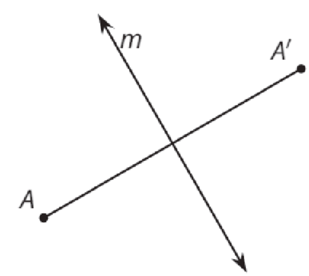
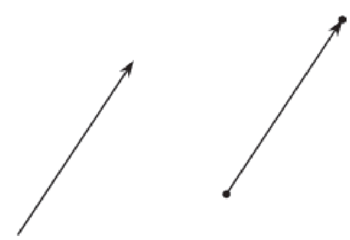
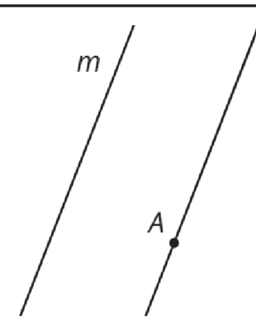
assertion</td><td>Parallel Postulate: Given a line m and a point A that is not on m, there is exactly one line that goes through A that is parallel to m.</td><td>
</td></tr>
</table>

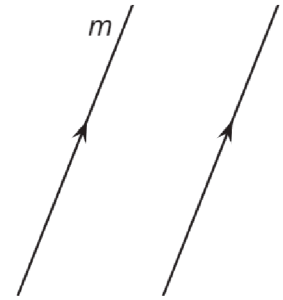
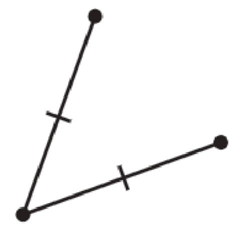
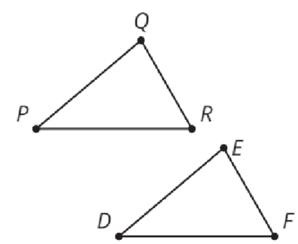
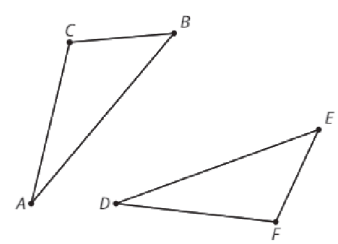
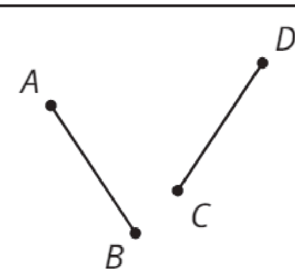
lesson, type	statement	diagram
U1, L12 theorem	Translations take lines to parallel lines or to themselves.	 *m* // *m′*
U1, L14 definition	**Rotation** is a rigid transformation that takes a point to another point on the circle through the original point with the given center. The two radii, the one from the center to the original point and the one from the center to 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*.
U2, L1 theorem	If two figures are congruent, then **corresponding** parts of those figures must be congruent	 $\triangle DEF \cong \triangle PQR$ so $\overline{PQ} \cong \overline{DE}$, $\overline{PR} \cong \overline{DF}$, $\overline{QR} \cong \overline{EF}$, $\angle P \cong \angle D$, $\angle Q \cong \angle E$, $\angle R \cong \angle F$
U2, L3 theorem	If all pairs of corresponding sides and all pairs of corresponding angles are congruent, then the triangles must be congruent.	 $\overline{AB} \cong \overline{DE}$, $\overline{BC} \cong \overline{EF}$, $\overline{AC} \cong \overline{DF}$, $\angle A \cong \angle D$, $\angle B \cong \angle E$, $\angle C \cong \angle F$ so $\triangle ABC \cong \triangle DEF$
U2, L5 theorem	If two segments have the same length, then they are congruent.	 $AB = CD$, so $\overline{AB} \cong \overline{CD}$

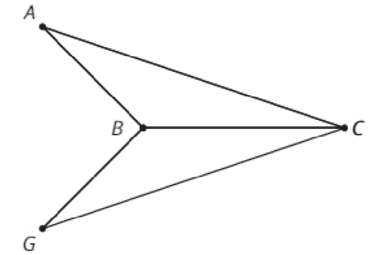
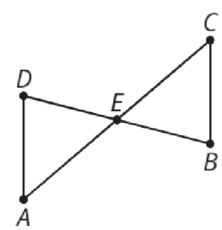
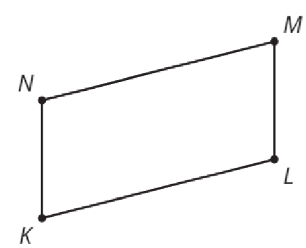
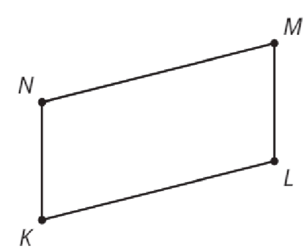
lesson, type	statement	diagram
U2, L6 theorem	**Side-Angle-Side Triangle Congruence Theorem:** In two triangles, if two pairs of congruent corresponding sides and the pair of corresponding angles between the sides are congruent, then the two triangles are congruent.	 $\overline{AB} \cong \overline{GB}$, $\overline{BC} \cong \overline{BC}$, $\angle ABC \cong \angle GBC$ so $\triangle ABC \cong \triangle GBC$
U2, L6 theorem	**Isosceles Triangle Theorem:** In an isosceles triangle, the base angles are congruent.	 $\overline{AP} \cong \overline{PB}$, so $\angle A \cong \angle B$
U2, L7 theorem	**Angle-Side-Angle Triangle Congruence Theorem:** In two triangles, if two pairs of corresponding angles are congruent and the pair of corresponding sides between the angles is congruent, then the triangles must be congruent.	 $\angle A \cong \angle C$, $\overline{AE} \cong \overline{EC}$, $\angle DEA \cong \angle BEC$, so $\triangle DEA \cong \triangle BEC$
U2, L7 definition	A **parallelogram** is a quadrilateral with two pairs of opposite sides parallel.	 $NM \parallel KL$, $NK \parallel ML$, so $MNKL$ is a parallelogram
U2, L7 theorem	In a parallelogram, pairs of opposite sides are congruent.	 $MNKL$ is a parallelogram, so $\overline{NM} \cong \overline{KL}$, $\overline{NK} \cong \overline{ML}$

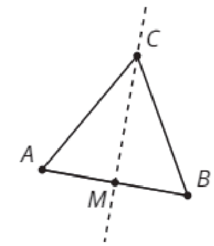
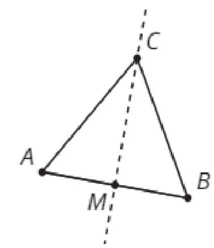
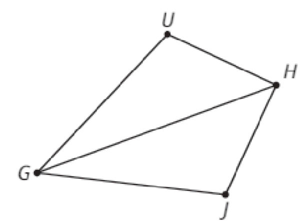
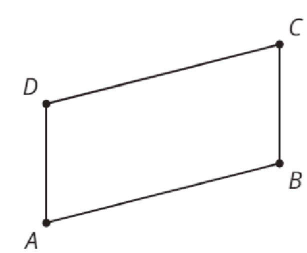
lesson, type	statement	diagram
U2, L8 theorem	If a point *C* is the same distance from *A* as it is from *B*, then *C* must be on the perpendicular bisector of *AB*.	 $\overline{AC}\cong\overline{BC}$, so *C* is on the line through midpoint *M* perpendicular to $\overline{AB}$.
U2, L8 theorem	If *C* is a point on the perpendicular bisector of *AB*, the distance from *C* to *A* is the same as the distance from *C* to *B*.	 $AB \perp CM$, $\overline{AM}\cong\overline{BM}$, so $\overline{AC}\cong\overline{BC}$
U2, L9 theorem	**Side-Side-Side Triangle Congruence Theorem:** In two triangles, if all three pairs of corresponding sides are congruent, then the triangles must be congruent.	 $\overline{HU}\cong\overline{HJ}$, $\overline{UG}\cong\overline{JG}$, $\overline{HG}\cong\overline{HG}$, so $\triangle HUG \cong \triangle HJG$
U2, L9 theorem	In a parallelogram, opposite angles are congruent.	 *ABCD* is a parallelogram, so $\angle A \cong \angle C$, $\angle D \cong \angle B$

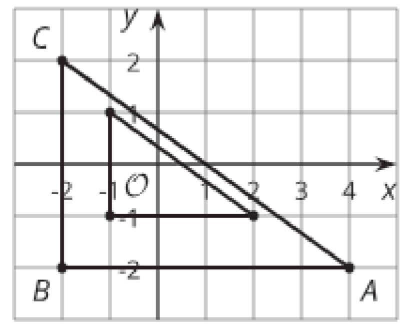
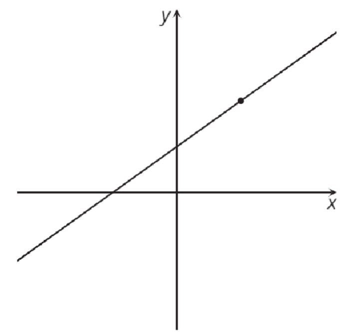
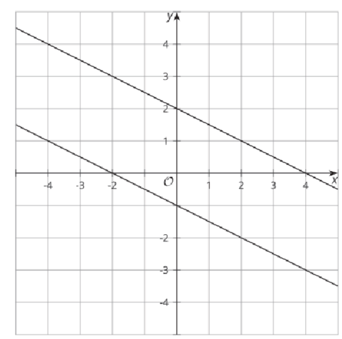
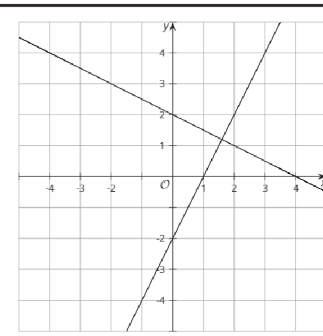
lesson, type	**statement**	**diagram**
U5, L2 definition	A **dilation** is a transformation in which each point on a figure moves along a line and changes its distance from a fixed point, called the "center of dilation." All of the original distances are multiplied by the same scale factor.	
U5, L4 definition	The **point-slope form** of the equation of a line is $y - k = m(x - h)$ where (h, k) is a particular point on the line and m is the slope of the line.	
U5, L5 theorem	Lines are parallel if and only if they have equal slopes.	
U5, L6 theorem	Lines are perpendicular if and only if their slopes are opposite reciprocals.	

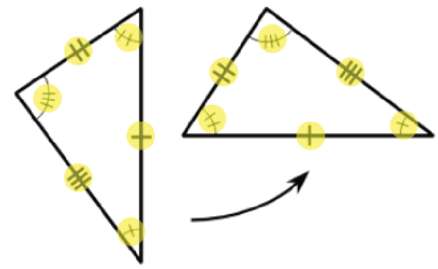
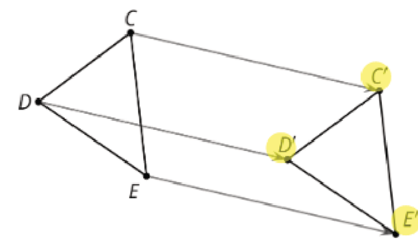
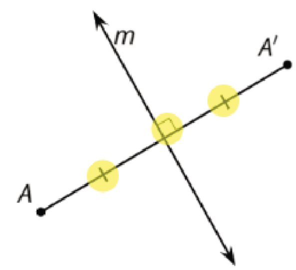
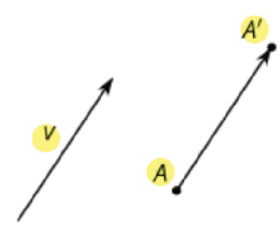
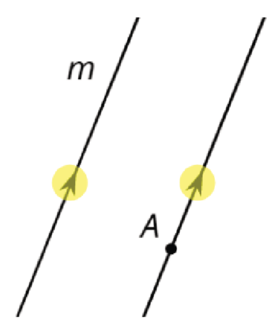
date, type	statement	diagram
assertion	A ______________________________ is a _______________, _______________, _______________, or any sequence of the three. Rigid transformations take lines to _______________, angles to _______________ of the same measure, and segments to _______________ of the same length.	
definition	One figure is _______________ to another if there is a sequence of _______________, _______________, and _______________ that takes the first figure _______________ onto the second figure. The second figure is called the _______________ of the rigid transformation.	
definition	_______________ is a rigid transformation that takes a point to another point that is the same _______________ from the given line, on the other side of the given line, and so that the segment from the original point to the image is __________________ to the given line. "Reflect _(object)_ across line _(name)_."	Reflect *A* across line *m*.
definition	_______________ is a rigid transformation that takes a point to another point so that the directed _____________________________ from the original point to the image is _______________ to the given line segment and has the same _______________ and _______________. "Translate _(object)_ by the directed line segment _(name or from [point] to [point])_."	Translate *A* by the directed line segment *v*.
assertion	**Parallel Postulate:** Given a _______________ *m* and a _______________ *A* that is not on _____, there is exactly _______________ that goes through *A* that is _______________ to *m*.	

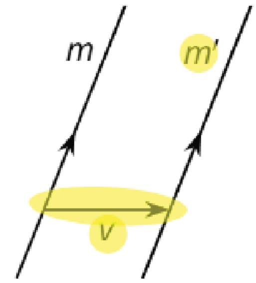
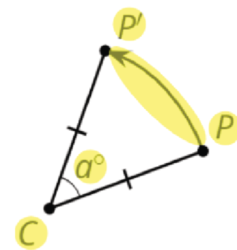
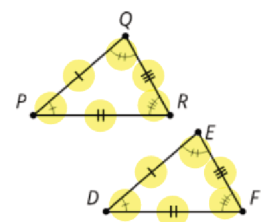
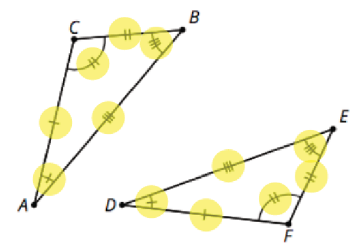
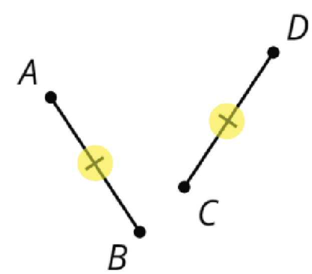
date, type	statement	diagram
theorem	______________ take lines to ___________________________ or to ______________.	
definition	______________ is a ______________ transformation that takes a point to another point on the circle through the original point with the given ______________. The two radii to the original point and the image make the given ______________. “Rotate _(object)_ (clockwise or counterclockwise) by _(angle or angle measure)_ using center _(point)_.”	 Rotate P counterclockwise by $a°$ using center C.
theorem	If two figures are ______________, then ______________ parts of those figures must be ______________.	 $\triangle PQR \cong \triangle DEF$ so $PQ=DE$, $PR=DF$, $QR=EF$, $\angle P \cong \angle D$, $\angle Q \cong \angle E$, $\angle R \cong \angle F$
theorem	If all pairs of corresponding ______________ and all pairs of corresponding ______________ are congruent, then the ______________ must be ______________.	 $AB=DE$, $BC=EF$, $CA=FD$, $\angle B \cong \angle E$, $\angle A \cong \angle D$, $\angle C \cong \angle F$ so
theorem	If two ______________ have the same ______________, then they are ______________.	

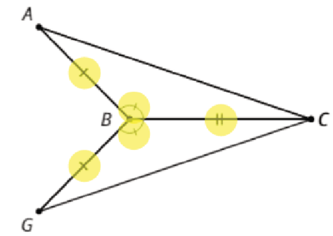
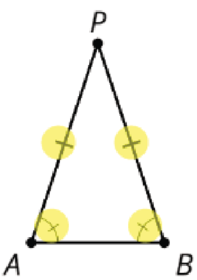
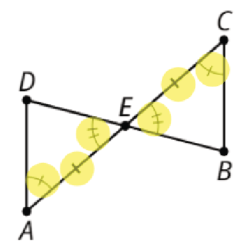
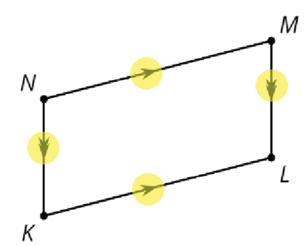
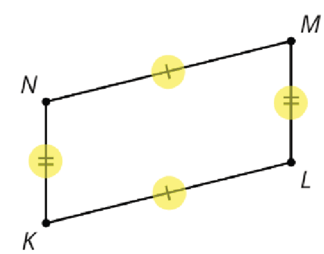
date, type	statement	diagram
theorem	______________________________ **Triangle Congruence Theorem:** In two triangles, if two pairs of congruent ____________________ and the pair of corresponding __________ between the sides are __________, then the two triangles are __________.	 *AB*=*GB*, *BC*=*BC*, ∠*ABC*≅∠*GBC* so
theorem	__________ **Triangle Theorem:** In an __________ triangle, the ____________________ are __________.	
theorem	______________________________ **Triangle Congruence Theorem:** In two triangles, if two pairs of corresponding __________, and the pair of corresponding __________ between the angles are __________, then the triangles must be __________.	 ∠*A*≅∠*C*, *AE*=*EC*, ∠*DEA*≅∠*BEC*, so
definition	A __________ is a quadrilateral with two pairs of __________ sides __________.	 *NM* // *KL*, *NK* // *ML*, so
theorem	In a __________, pairs of __________ sides are __________.	 *MNKL* is a parallelogram, so

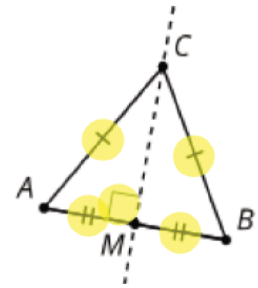
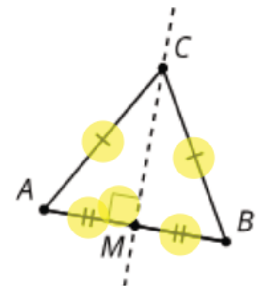
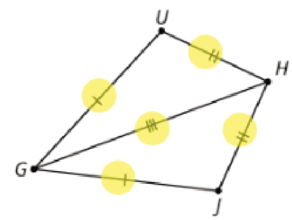
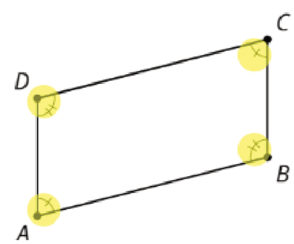
date, type	statement	diagram
theorem	If a ______________ *C* is the same ______________ from _____ as it is from _____, then *C* must be on the ____________________________ of *AB*.	 *AC*=*BC*, *M* is the midpoint, so
theorem	If *C* is a point on the ____________________________ of segment *AB*, the distance from _____ to _____ is the same as the ______________ from _____ to _____.	 *AB*⊥*CM*, *AM*=*BM*, so
theorem	____ **Triangle Congruence Theorem:** In two triangles, if ____________________________ of corresponding ______________ are congruent, then the triangles must be ______________.	 *HU*=*HJ*, *UG*=*JG*, *HG*=*HG* so
theorem	In a ______________, ______________ angles are ______________.	 *ABCD* is a parallelogram, so

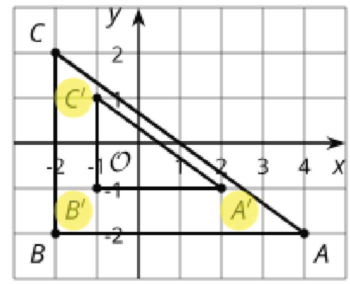
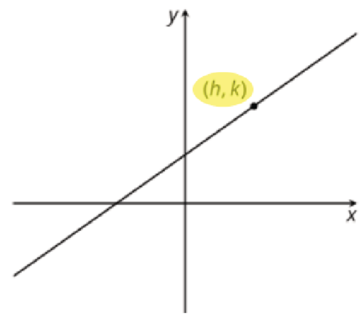
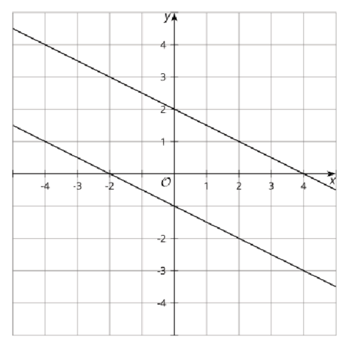
date, type	statement	diagram
definition	A ___________ is a transformation in which each point on a figure moves along a line and changes its distance from a fixed point, called the "_______________." All of the original distances are multiplied by the same ______________.	
definition	The ____________________________ form of the equation of a line is ____________________________ where (h, k) is a particular ______________ on the line and m is the ______________ of the line.	
theorem	Lines are ______________ if and only if they have ____________________________.	
theorem	Lines are ______________ if and only if their ______________ are ____________________________.	

lesson, type	statement	diagram
U1, L10 (students write the date) assertion	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.	
U1, L10 definition	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.	 $\triangle EDC \cong \triangle E'D'C'$
U1, L11 definition	**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*.
U1, L12 definition	**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*.
U1, L12 assertion	**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*.	

lesson, type	statement	diagram
U1, L12 theorem	Translations take lines to parallel lines or to themselves.	 $m \parallel m'$
U1, L14 definition	**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*.
U2, L1 theorem	If two figures are congruent, then **corresponding** parts of those figures must be congruent	 $\triangle PQR \cong \triangle DEF$ so $PQ=DE$, $PR=DF$, $QR=EF$, $\angle P \cong \angle D$, $\angle Q \cong \angle E$, $\angle R \cong \angle F$
U2, L3 theorem	If all pairs of corresponding sides and all pairs of corresponding angles are congruent, then the triangles must be congruent.	 $AB=DE$, $BC=EF$, $CA=FD$, $\angle B \cong \angle E$, $\angle A \cong \angle D$, $\angle C \cong \angle F$ so $\triangle ABC \cong \triangle DEF$
U2, L5 theorem	If two segments have the same length, then they are congruent.	 $AB = CD$ so, $\overline{AB} \cong \overline{CD}$

lesson, type	statement	diagram
U2, L6 theorem	**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 $\triangle ABC \cong \triangle GBC$
U2, L6 theorem	**Isosceles Triangle Theorem:** In an isosceles triangle, the base angles are congruent.	 $AP=PB$ so $\angle A \cong \angle B$
U2, L7 theorem	**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 $\triangle DEA \cong \triangle BEC$
U2, L7 definition	A **parallelogram** is a quadrilateral with two pairs of opposite sides parallel.	 $NM \parallel KL$, $NK \parallel ML$, so *MNKL* is a parallelogram
U2, L7 theorem	In a parallelogram, pairs of opposite sides are congruent.	 *MNKL* is a parallelogram, so $NM=KL$, $NK=ML$

lesson, type	statement	diagram
U2, L8 theorem	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 $MC \perp AB$
U2, L8 theorem	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 $AC=BC$
U2, L9 theorem	**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 $\triangle HUG \cong \triangle HJG$
U2, L9 theorem	In a parallelogram, opposite angles are congruent.	 $ABCD$ is a parallelogram, so $\angle A \cong \angle C$, $\angle D \cong \angle B$

lesson, type	statement	diagram
U5, L2 definition	A **dilation** is a transformation in which each point on a figure moves along a line and changes its distance from a fixed point, called the “center of dilation.” All of the original distances are multiplied by the same scale factor.	
U5, L4 definition	The **point-slope form** of the equation of a line is $y - k = m(x - h)$ where (h, k) is a particular point on the line and m is the slope of the line.	
U5, L5 theorem	Lines are parallel if and only if they have equal slopes.	
U5, L6 theorem	Lines are perpendicular if and only if their slopes are opposite reciprocals.