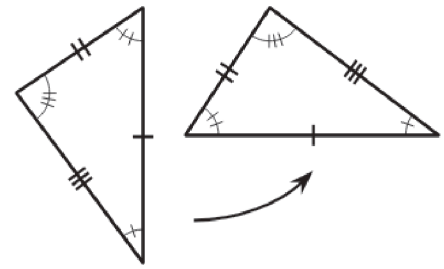
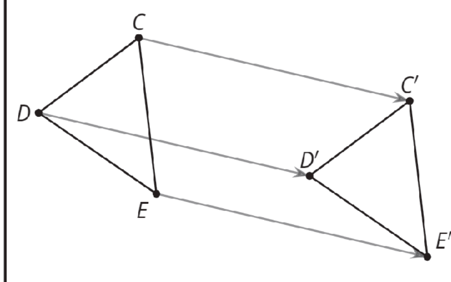
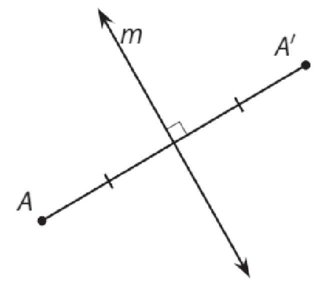
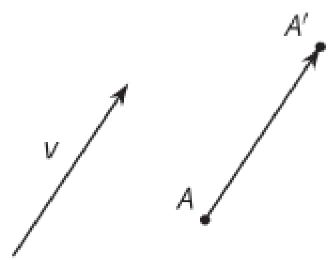
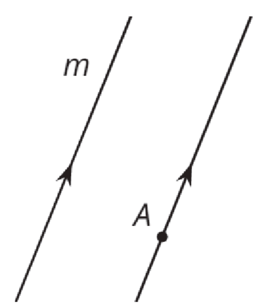
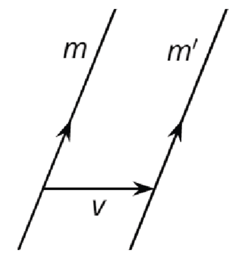
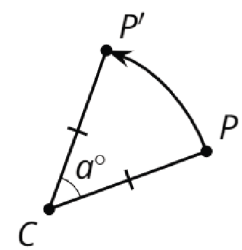
lesson, type	statement	diagram
U1, L10 (students write the date) assertion	A **rigid transformation** is a translation, reflection, rotation, or any sequence of the three. Rigid transformations take lines to lines, angles to angles of the same measure, and segments to segments of the same length.	
U1, L10 definition	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.	 $\triangle EDC \cong \triangle E'D'C'$
U1, L11 definition	**Reflection** is a rigid transformation that takes a point to another point that is the same distance from the given line, 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 _(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*.	

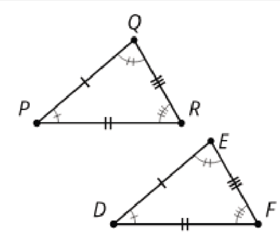
<table>
<tr><th>lesson, type</th><th>statement</th><th>diagram</th></tr>
<tr><td>U1, L12

theorem</td><td>Translations take lines to parallel lines or to themselves.</td><td>

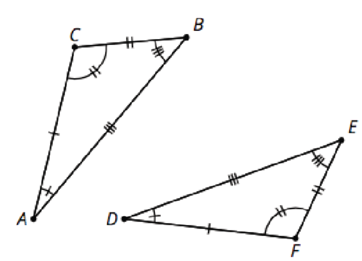
$m \parallel m'$</td></tr>
<tr><td>U1, L14

definition</td><td>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 <u>(object)</u> (clockwise or counterclockwise) by <u>(angle or angle measure)</u> using center <u>(point)</u>.”</td><td>

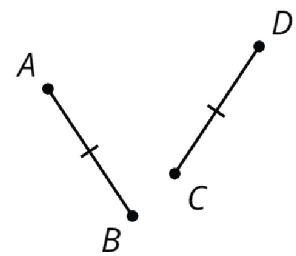
Rotate P counterclockwise by a° using center C.</td></tr>
<tr><td>U2, L1

theorem</td><td>If two figures are congruent, then corresponding parts of those figures must be congruent</td><td>

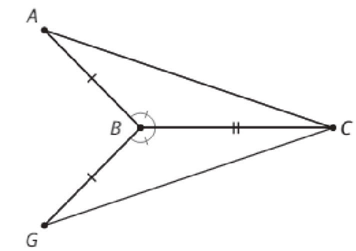
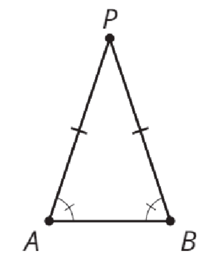
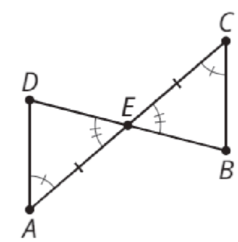
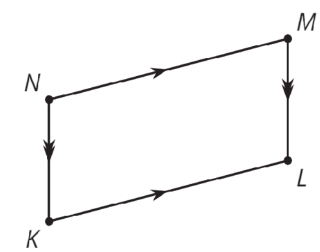
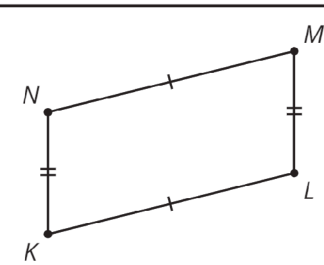
$\triangle DEF \cong \triangle PQR$ so $\overline{PQ} \cong \overline{DE}$, $\overline{PR} \cong \overline{DF}$, $\overline{QR} \cong \overline{EF}$, $\angle P \cong \angle D$, $\angle Q \cong \angle E$, $\angle R \cong \angle F$</td></tr>
<tr><td>U2, L3

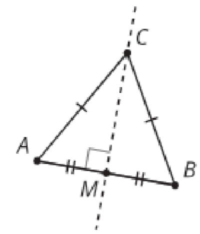
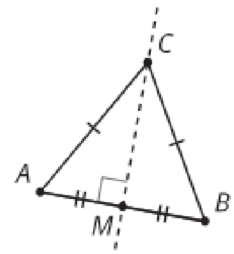
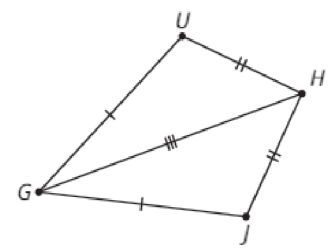
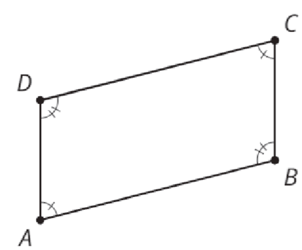
theorem</td><td>If all pairs of corresponding sides and all pairs of corresponding angles are congruent, then the triangles must be congruent.</td><td>

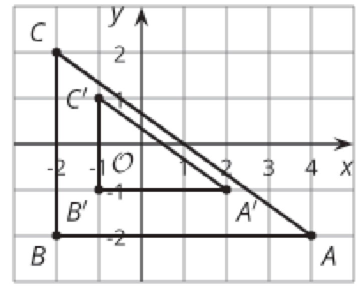
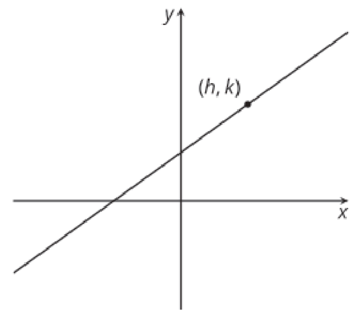
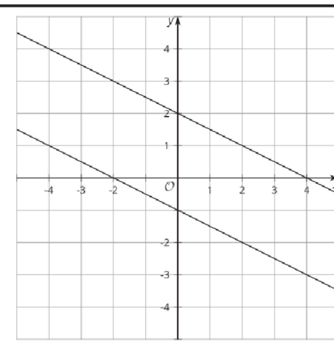
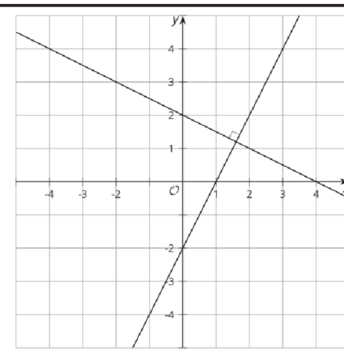
$\overline{AB} \cong \overline{DE}$, $\overline{BC} \cong \overline{EF}$, $\overline{AC} \cong \overline{DF}$, $\angle A \cong \angle D$, $\angle B \cong \angle E$, $\angle C \cong \angle F$ so $\triangle ABC \cong \triangle DEF$</td></tr>
<tr><td>U2, L5

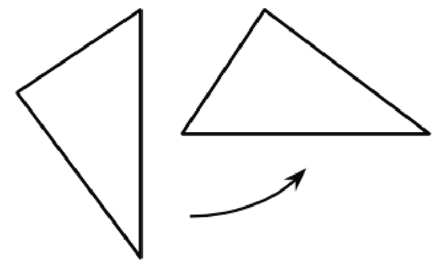
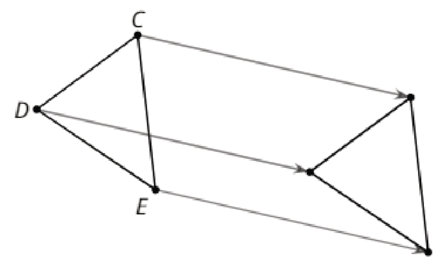
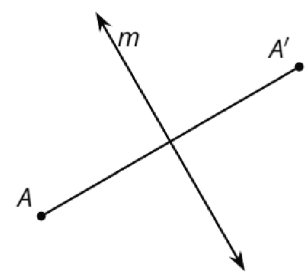
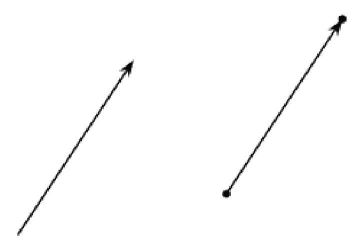
theorem</td><td>If two segments have the same length, then they are congruent.</td><td>

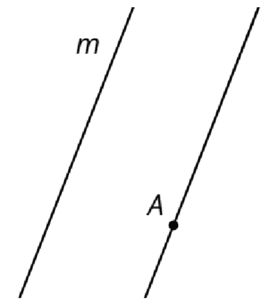
$AB = CD$, so $\overline{AB} \cong \overline{CD}$</td></tr>
</table>

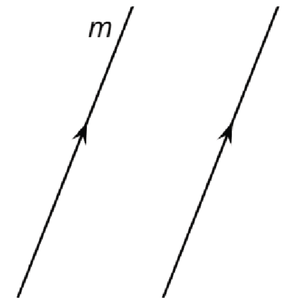
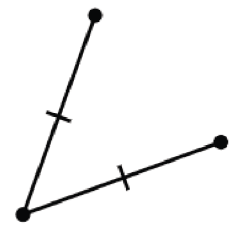
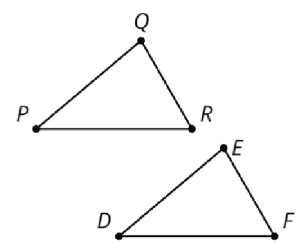
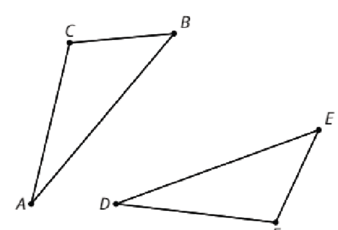
lesson, type	statement	diagram
U2, L6 theorem	**Side-Angle-Side Triangle Congruence Theorem:** In two triangles, if two pairs of congruent corresponding sides and the pair of corresponding angles between the sides are congruent, then the two triangles are congruent.	 $\overline{AB} \cong \overline{GB}$, $\overline{BC} \cong \overline{BC}$, $\angle ABC \cong \angle GBC$ 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 $\overline{NM} \cong \overline{KL}$, $\overline{NK} \cong \overline{ML}$

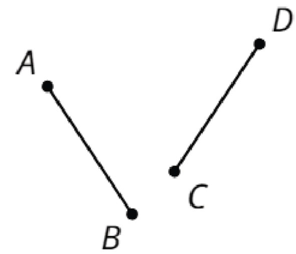
lesson, type	statement	diagram
U2, L8 theorem	If a point *C* is the same distance from *A* as it is from *B*, then *C* must be on the perpendicular bisector of *AB*.	 $\overline{AC} \cong \overline{BC}$, so *C* is on the line through midpoint *M* perpendicular to $\overline{AB}$.
U2, L8 theorem	If *C* 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 $\angle A \cong \angle C$, $\angle D \cong \angle B$

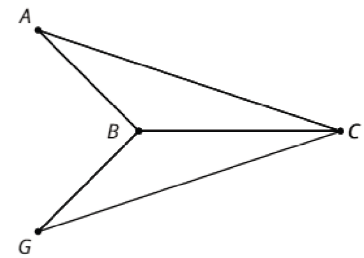
lesson, type	statement	diagram
U5, L2 definition	A **dilation** is a transformation in which each point on a figure moves along a line and changes its distance from a fixed point, called the “center of dilation.” All of the original distances are multiplied by the same scale factor.	
U5, L4 definition	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.	

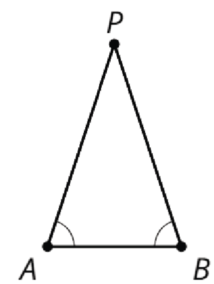
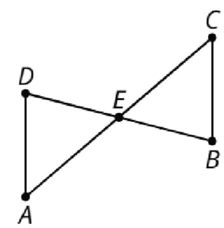
fecha, tipo	**afirmación**	**diagrama**
aserción	Una ______________________________ es una _______________, _______________, _______________, o cualquier secuencia de las tres. Las transformaciones rígidas llevan rectas a _______________, ángulos a _______________ de la misma medida y segmentos a _______________ de la misma longitud.	
definición	Una figura es _______________ a otra si existe una secuencia de _______________, _______________ y _______________ que lleven la primera figura _______________ a la segunda figura. La segunda figura se llama la _______________ de la transformación rígida.	
definición	Una _______________ es una transformación rígida que lleva un punto a otro punto que está a la misma _______________ de la recta dada, pero del otro lado. El segmento que va del punto original a la imagen es __________________ a la recta dada. “Reflejar _(objeto)_ con respecto a la recta _(nombre)”.	Reflejar *A* con respecto a la recta *m*.
definición	Una _______________ es una transformación rígida que lleva un punto a otro punto de modo que el _____________________________ dirigido que va del punto original a la imagen es _______________ al segmento de recta dado y tiene la misma _______________ y _______________. “Trasladar _(objeto)_ usando el segmento de recta dirigido _(nombre o que va de [punto] a [punto])”.	Trasladar *A* usando el segmento de recta dirigido *v*.

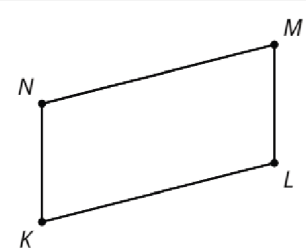
aserción	**Postulado de rectas paralelas:** Dada una ______________ *m* y un ______________ *A* que no está en _____, hay exactamente ______________ que pasa por *A* que es ______________ a *m*.	

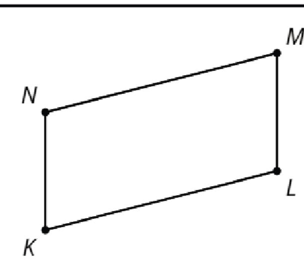
fecha, tipo	**afirmación**	**diagrama**
teorema	Las ______________ llevan rectas a ____________________________ o a ______________.	
definición	Una ______________ es una transformación ______________ que lleva un punto a otro punto que está en el círculo con el ______________ dado y que pasa por el punto original. Los dos radios, el que va del centro al punto original y el que va del centro a la imagen forman el ______________ dado. “Rotar _(objeto)_ (en el sentido de las manecillas del reloj o en el sentido contrario) usando _(ángulo o medida del ángulo)_ como ángulo y _(punto)_ como centro ”.	 Rotar *P* en el sentido contrario de las manecillas del reloj usando a° como ángulo y C como centro.
teorema	Si dos figuras son ______________, entonces las partes ______________ de esas figuras deben ser ______________.	 $\triangle PQR \cong \triangle DEF$, entonces *PQ=DE*, *PR=DF*, *QR=EF*, ∠*P*≅∠*D*, ∠*Q*≅∠*E*, ∠*R*≅∠*F*.
teorema	Si todas las parejas de ______________ correspondientes y todas las parejas de ______________ correspondientes son congruentes, entonces los ______________ deben ser ______________.	 *AB=DE*, *BC=EF*, *CA=FD*, ∠*B*≅∠*E*, ∠*A*≅∠*D*, ∠*C*≅∠*F*, entonces

teorema	Si dos _______________ tienen la misma _______________, entonces son _______________.	

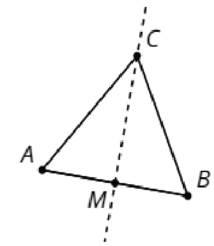
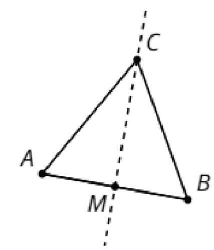
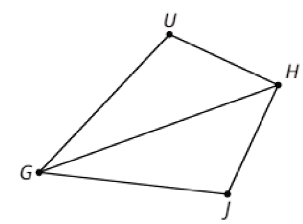
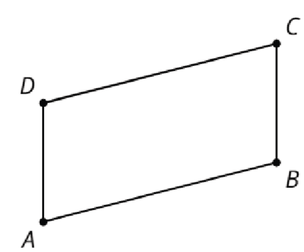
<table>
<tr><th>fecha, tipo</th><th>afirmación</th><th>diagrama</th></tr>
<tr><td>teorema</td><td>Teorema de congruencia de triángulos ______________________________: dados dos triángulos, si hay dos parejas de __________ correspondientes que son __________ y los dos __________ correspondientes que ellos forman son __________, entonces los triángulos son __________.</td><td>

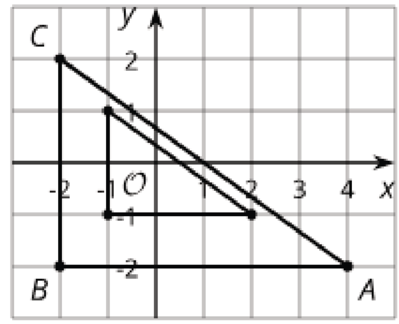
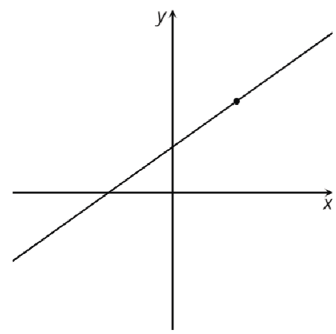
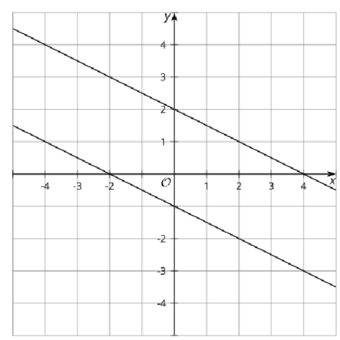
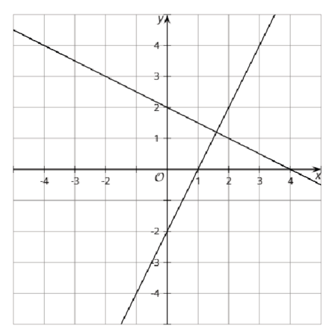
AB=GB, BC=BC, ∠ABC≅∠GBC, entonces</td></tr>
<tr><td>teorema</td><td>Teorema del triángulo __________:
en un triángulo __________ , los ____________________ son __________.</td><td>
</td></tr>
<tr><td>teorema</td><td>Teorema de congruencia de triángulos ______________________________: dados dos triángulos, si hay dos parejas de __________ correspondientes que son __________ y los dos __________ correspondientes que están entre ellos son __________, entonces los triángulos son __________.</td><td>

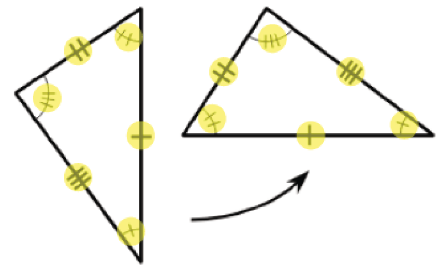
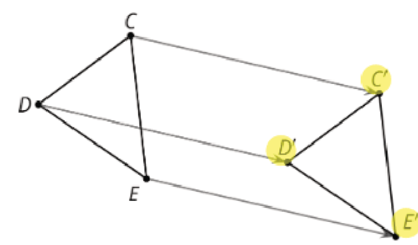
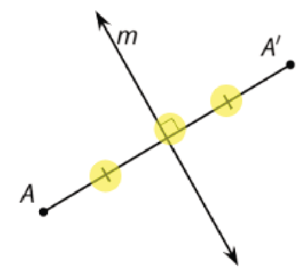
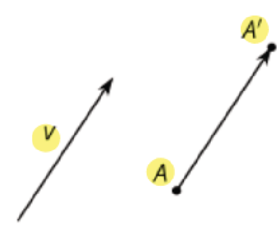
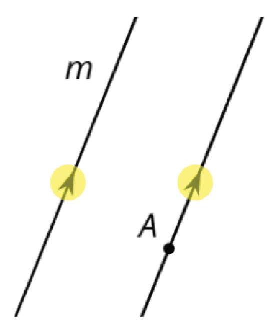
∠A≅∠C, AE=EC, ∠DEA≅∠BEC, entonces</td></tr>
<tr><td>definición</td><td>Un __________ es un cuadrilátero que tiene dos parejas de lados __________ que son __________.</td><td>

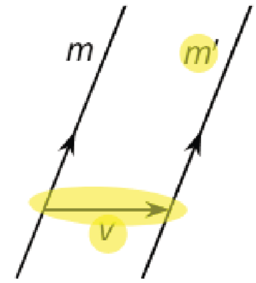
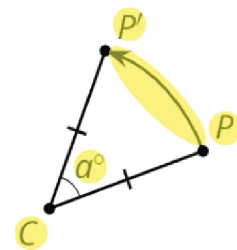
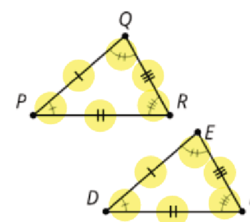
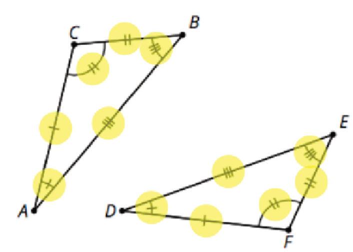
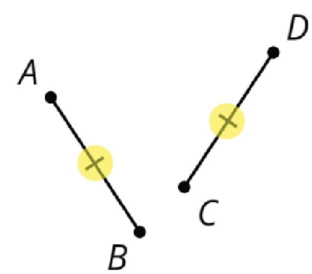
NM ∥ KL, NK ∥ ML, entonces</td></tr>
<tr><td>teorema</td><td>En un __________, los lados que son __________ también son __________.</td><td>

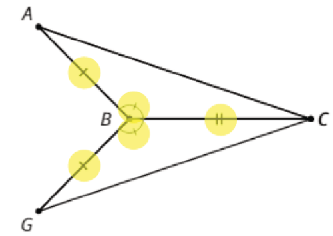
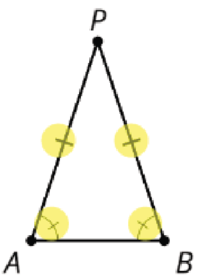
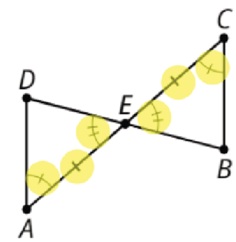
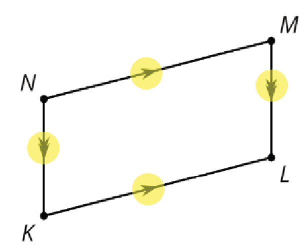
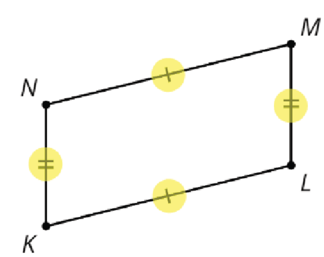
MNKL es un paralelogramo, entonces</td></tr>
</table>

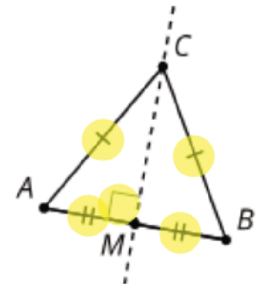
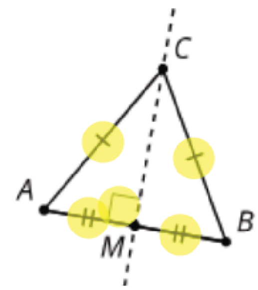
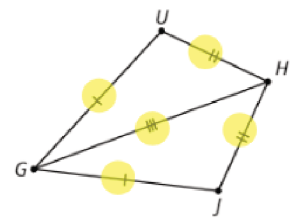
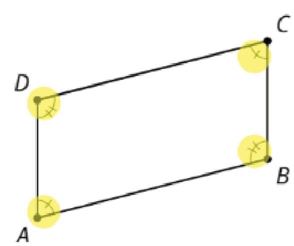
fecha, tipo	afirmación	diagrama
teorema	Si un ______________ *C* está a la misma ______________ de _____ que de _____, entonces *C* debe estar en la ____________________________ de *AB*.	 *AC*=*BC*, *M* es el punto medio, entonces
teorema	Si *C* es un punto de la ____________________________ del segmento *AB*, la distancia de _____ a _____ es igual a la ______________ de _____ a _____.	 *AB*⊥*CM*, *AM*=*BM*, entonces
teorema	**Teorema de congruencia de triángulos ____________________________________:** dados dos triángulos, si ____________________________ de ______________ correspondientes son congruentes, entonces los triángulos deben ser ______________.	 *HU*=*HJ*, *UG*=*JG*, *HG*=*HG*, entonces
teorema	En un ______________, los ángulos ______________ son ______________.	 *ABCD* es un paralelogramo, entonces

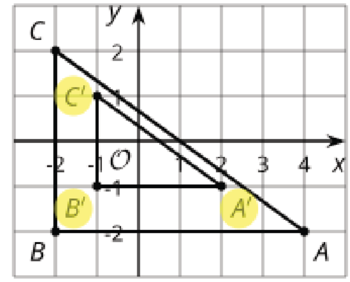
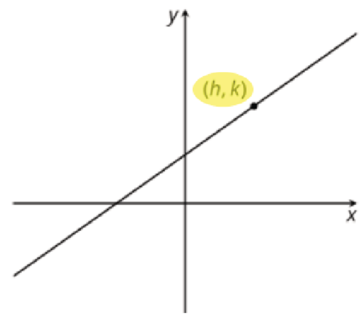
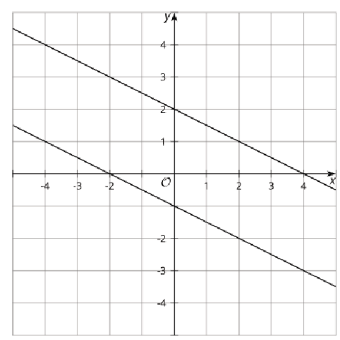
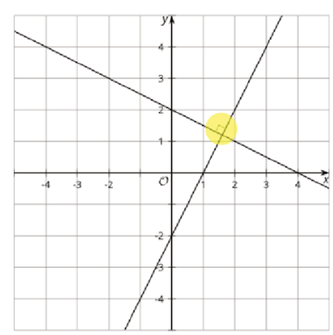
fecha, tipo	**afirmación**	**diagrama**
definición	Una ___________ es una transformación en la que cada punto de una figura es llevado a lo largo de una recta y cuya distancia a un punto fijo, llamado el "________________", cambia. Todas las distancias originales se multiplican por el mismo ______________.	
definición	La forma ____________________________ de la ecuación de una recta es ___________________________, donde (h, k) es un ______________ específico de la recta y m es la ______________ de la recta.	
teorema	Dos rectas son ______________ si y solo si tienen ____________________________.	
teorema	Dos rectas son ______________ si y solo si sus ______________ son ____________________________.	

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* // *KL*, *NK* // *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.	

fecha, tipo	afirmación	diagrama

