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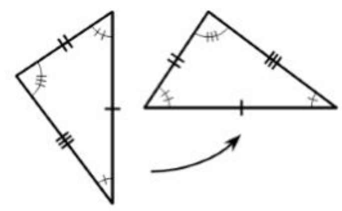
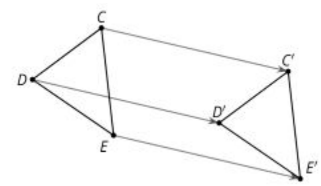
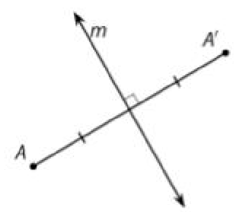
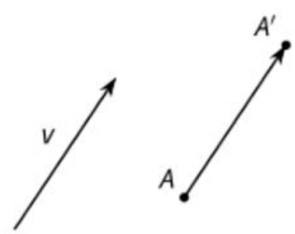
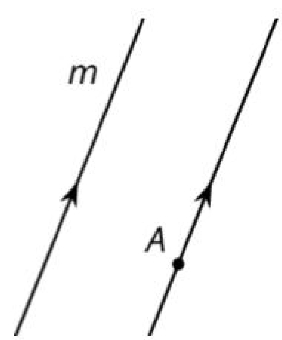
type	statement	diagram
Assertion G.1.10	A ____ is a ____, ____, ____, or any sequence of the three. Rigid transformations take lines to ____, angles to ____ of the same measure, and segments to ____ the same length.	
Definition G.1.10	One figure is ____ to another if there is a sequence of ____, ____, and ____ that takes the first figure ____ onto the second figure. The second figure is called the ____ of the rigid transformation.	 △EDC ≅ △E'D'C'
Definition G.1.11	____ 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 G.1.12	____ 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 G.1.12	**Parallel Postulate:** Given a ____ m and a ____ A that is not on , there is exactly ____ that goes through A that is ____ to m.	

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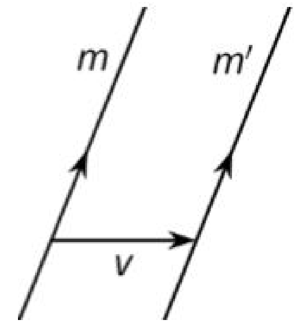
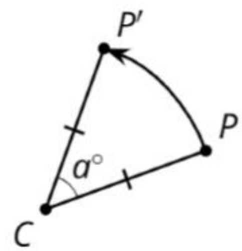
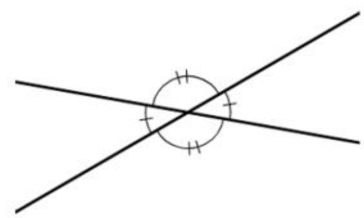
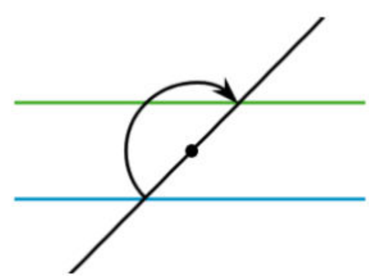
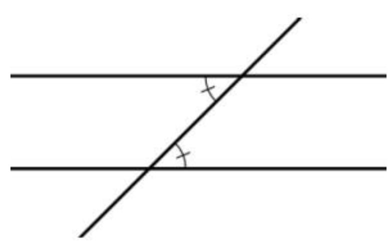
Theorem G.1.12	____ take lines to ____ or to ____.	 $m \parallel m'$
Definition G.1.14	____ is a ____ transformation that takes a point to another point on the circle through the original point with the given ____. The two radii to the original point and the image make the given ____. Rotate (object) (clockwise or counterclockwise) by (angle or angle measure) using center (point) .	 Rotate *P* counterclockwise by *a*° using center *C*.
Theorem G.1.19	____ angles are ____.	
Assertion G.1.20	____ by ____ takes lines to ____ lines or to ____.	
Theorem G.1.20	____ **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 ____.	

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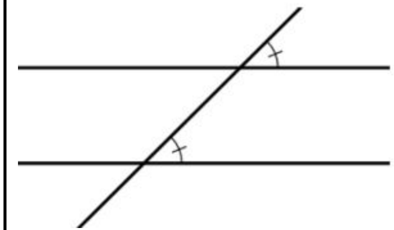
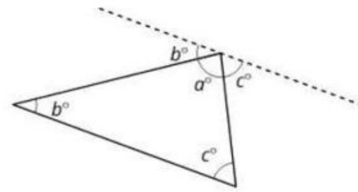
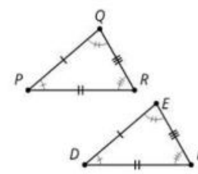
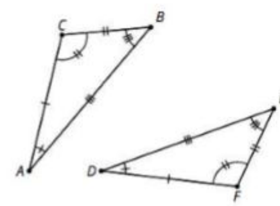
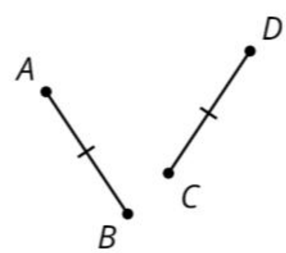
Theorem G.1.20	_____ **Angle Theorem**: If two _____lines are cut by a _____, then corresponding angles are _____. Conversely, if two _____are cut by a _____and corresponding angles are congruent, then the lines have to be _____.	
Theorem G.1.21	**Triangle** _____ **Theorem**: The three _____measures of any always sum to _____degrees	 $a + b + c = 180$
Theorem G.2.1	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 G.2.3	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 $\triangle ABC \cong \triangle DEF$
Theorem G.2.5	If two _____have the same_____, then they are _____.	 $AB = CD$ so, $\overline{AB} \cong \overline{CD}$

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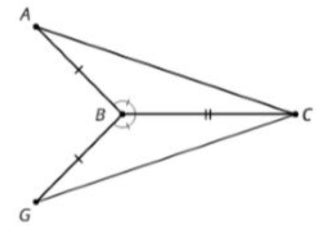
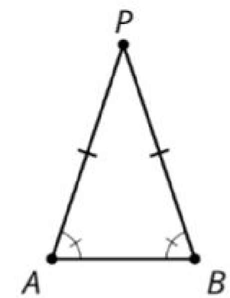
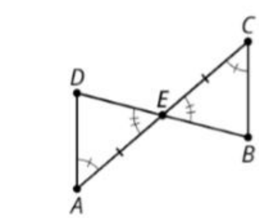
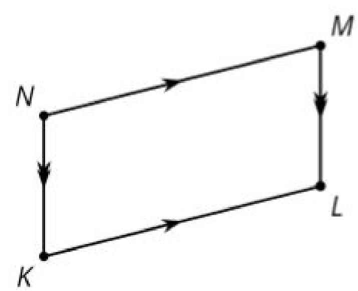
Theorem G.2.6	____ **Triangle Congruence Theorem**: In two triangles, if two pairs of congruent ____ and the pair of corresponding between the sides are ____, then the two triangles are ____.	AB=GB, BC=BC, ∠ABC≅∠GBC so △ABC ≅△GBC
Theorem G.2.6	____ **Triangle Theorem**: In an ____ triangle, the ____ are ____.	AP=PB so ∠A≅∠B
Theorem G.2.7	____ **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 △DEA≅△BEC
Definition G.2.7	A ____ is a quadrilateral with two pairs of ____ sides ____.	NM ∥ KL, NK ∥ ML, so MNKL is a parallelogram

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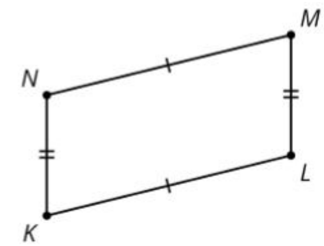
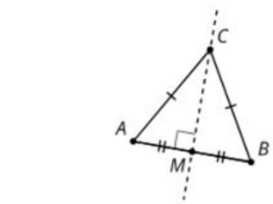
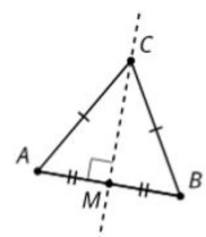
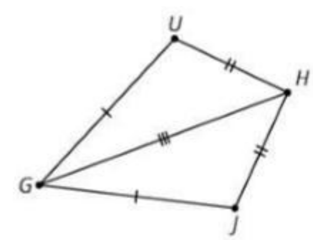
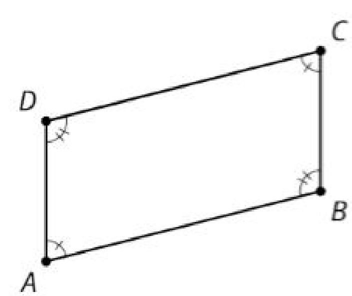
Theorem G.2.7	In a ____, pairs of ____sides are ____.	 $MNKL$ is a parallelogram, so $NM=KL$, $NK=ML$
Theorem G.2.8	If a ____ C is the same ____from ____as it is from ____, then C must be on the ____of AB .	 $AC=BC$, M is the midpoint, so $MC \perp AB$
Theorem G.2.8	If C is a point on the ____of segment AB , the distance from to ____is the same as the ____from ____to ____.	 $AB \perp CM$, $AM=BM$, so $AC=BC$
Theorem G.2.9	____ **Triangle Congruence Theorem**: In two triangles, if of corresponding ____are congruent, then the triangles must be .	 $HU=HJ$, $UG=JG$, $HG=HG$ so $\triangle HUG \cong \triangle HJG$
Theorem G.2.9	In a ____, ____angles are ____.	 $ABCD$ is a parallelogram, so $\angle A \cong \angle C$, $\angle D \cong \angle B$

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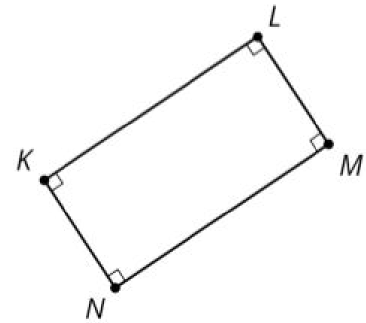
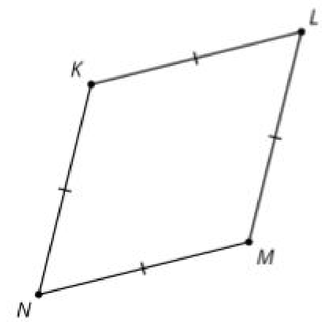
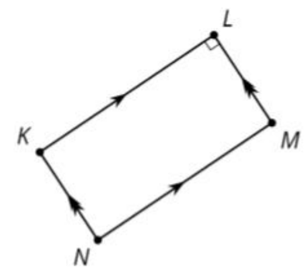
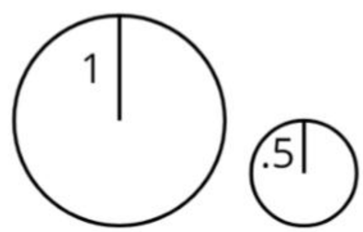
Definition G.2.12	A ____ is a quadrilateral with four ____.	
Definition G.2.12	A ____ is a quadrilateral with four ____ sides.	
Theorem G.2.12	If a ____ has (at least) one ____, then it is a ____.	 *KLMN* has a right angle so it is a rectangle
Definition G.3.1	____ is the factor by which every ____ in an original figure is when you make a ____ copy.	 Scale factor is 2 or ½

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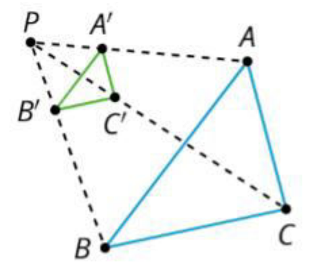
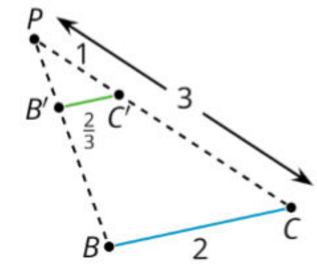
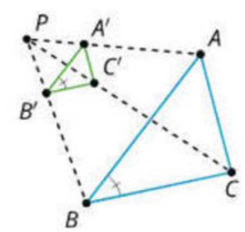
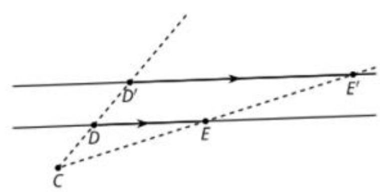
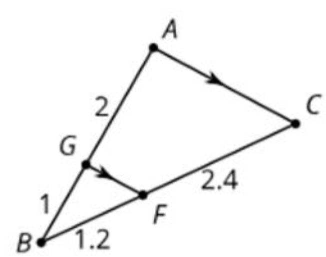
Definition G.3.1	A ____ with center P and positive ____ k takes a point A along the ____ PA to another point whose ____ is k times further away from P than ____ is. Dilate (object) using center (point) and a scale factor of (number).	 $PA' = k \cdot PA$
Assertion G.3.3	The ____ of a line segment is ____ or shorter according to the same ____ given by the ____.	 $PC:PC' = 3:1$, $BC:B'C' = 2:\frac{2}{3}$
Assertion G.3.4	If a figure is ____, then corresponding ____ are ____.	 $\triangle A'B'C'$ is a dilation of $\triangle ABC$ so $\angle B \cong \angle B'$
Theorem G.3.4	A ____ takes a line not passing through the ____ of the dilation to a line, and leaves a line passing through the ____ unchanged.	 Dilate using center C. $DE \parallel D'E'$
Theorem G.3.5	If a line divides two ____ of a triangle proportionally, the ____ must be ____ to the ____ of the triangle.	 $\frac{1}{2} = \frac{1.2}{2.4}$ so $AC \parallel GF$

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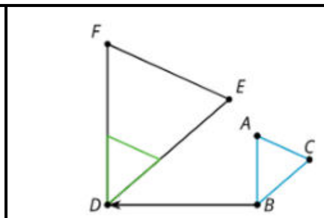
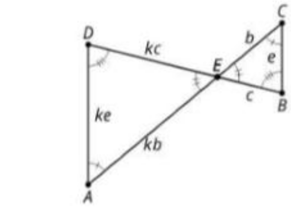
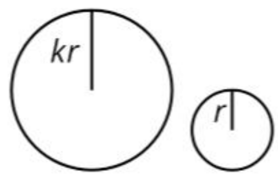
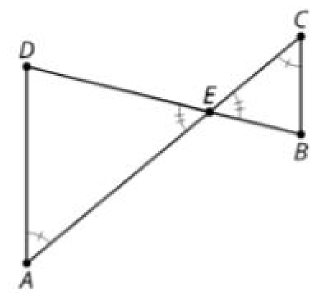
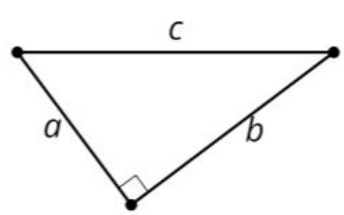
Definition G.3.6	One figure is _____ to another if there is a sequence of _____ and that takes the first figure so that it fits _____ over the second.	 Translation and dilation takes $\triangle ABC$ onto $\triangle DEF$ so $\triangle ABC \sim \triangle DEF$
Theorem G.3.7	If two _____ have all pairs of 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 $\triangle DEA \sim \triangle BEC$
theorem G.3.8	All _____.	
Theorem G.3.9	_____ **Triangle Similarity Theorem**: In two _____, if _____ pairs of corresponding _____ are congruent, then the triangles must be .	 $\angle A \cong \angle C$, $\angle DEA \cong \angle BEC$, so $\triangle DEA \sim \triangle BEC$
theorem G.3.14	_____ **Theorem**: If a _____ triangle has _____ with lengths and _____ and hypotenuse with length c , then _____.	 $a^2 + b^2 = c^2$

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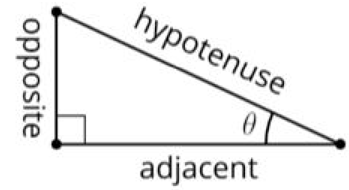
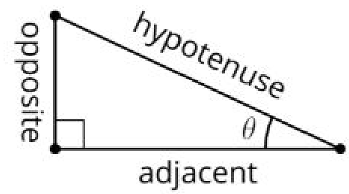
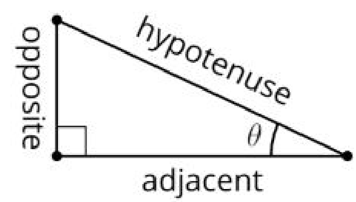
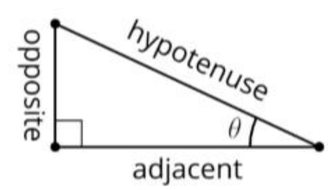
Definition G.4.6	The _____of an acute angle in a _____triangle is the ratio (quotient) of the length of the _____leg to the length of the _____.	 $\cos(\theta) = \frac{\text{adjacent}}{\text{hypotenuse}}$
Definition G.4.6	The _____of an acute angle in a _____triangle is the ratio (quotient) of the length of the _____leg to the length of the _____.	 $\sin(\theta) = \frac{\text{opposite}}{\text{hypotenuse}}$
Definition G.4.6	The _____of an acute angle in a _____triangle is the ratio (quotient) of the length of the _____leg to the length of the _____ leg.	 $\tan(\theta) = \frac{\text{opposite}}{\text{adjacent}}$
Definition G.4.9	The _____of a number between _____and _____is the acute whose _____is that number.	 $\arccos\left(\frac{\text{adjacent}}{\text{hypotenuse}}\right) = \theta$

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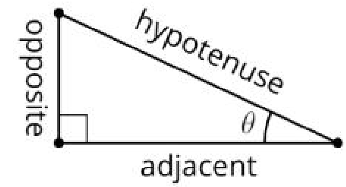
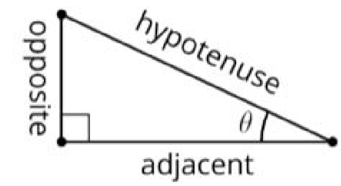
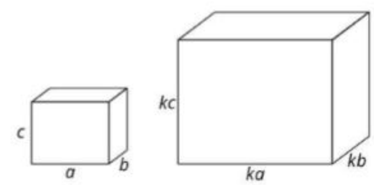
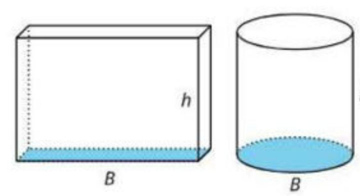
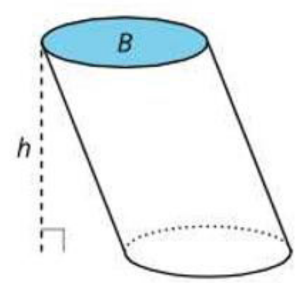
Definition G.4.9	The _____of a number between _____and _____is the acute whose _____is that number.	 $\arcsin\left(\frac{\text{opposite}}{\text{hypotenuse}}\right) = \theta$
Definition G.4.9	The _____of a positive number is the acute _____whose _____is that number.	 $\arctan\left(\frac{\text{opposite}}{\text{adjacent}}\right) = \theta$
Theorem G.5.6	When any solid is _____using a _____of k , all lengths are multiplied by _____, all areas are multiplied by _____, and all volumes are multiplied by _____.	
Theorem G.5.10	**Cavalieri's Principle**: If two solids are cut into cross sections by planes, and the corresponding _____on each plane always have areas, then the two solids have the same _____.	
Theorem G.5.10	A _____or _____whose base has area _____ square units and whose _____is h units has volume _____ cubic units, regardless of the shape of the base or whether the solid is oblique.	

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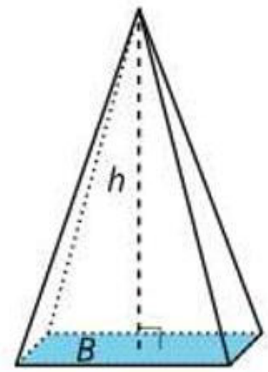
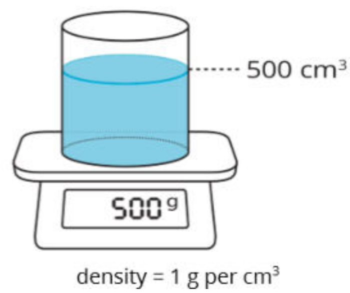
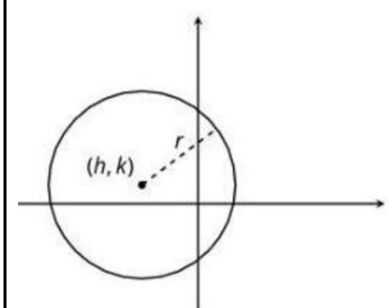
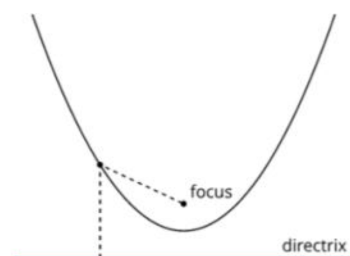
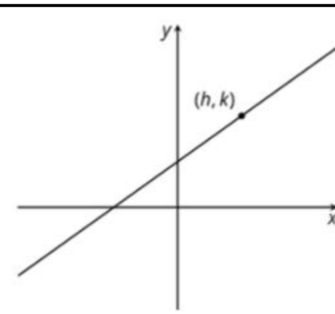
Theorem G.5.13	A ____or ____whose base has area ____ square units and whose ____is h units has volume ____cubic units, regardless of the shape of the base or whether the solid is oblique.	
Definition G.5.17	The ____of a substance is the ____of the substance per unit . density = ____.	
Theorem G.6.4	A ____with ____(h, k) and ____ r has equation ____.	
Definition G.6.7	A ____is the set of ____that are equidistant from a given point, called the ____, and a given line, called the ____.	
Definition G.6.9	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.	

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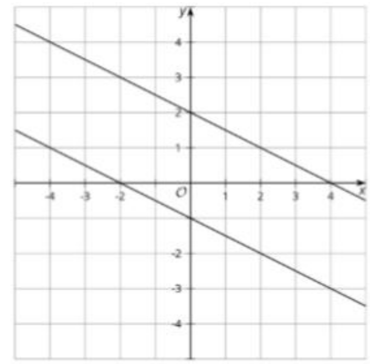
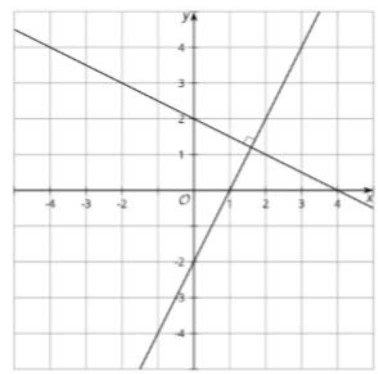
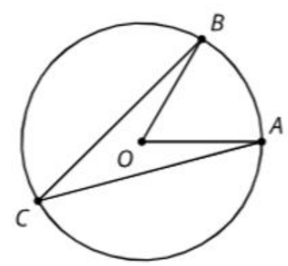
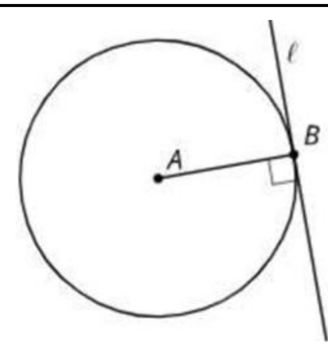
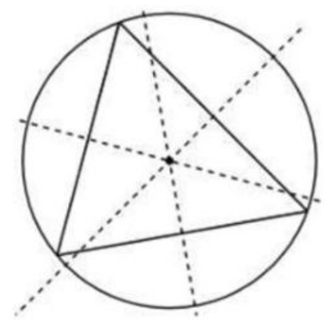
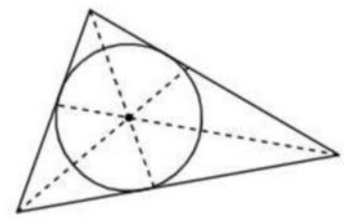
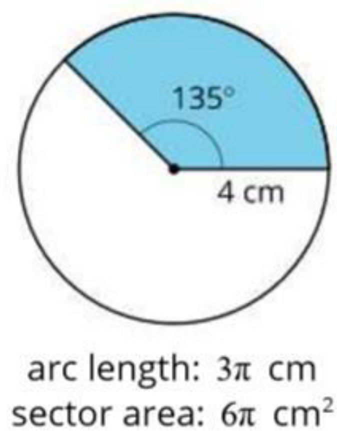
Theorem G.6.10	Lines are ____ if and only if they have ____.	
Theorem G.6.11	Lines are ____ if and only if their ____ are ____.	
Assertion G.7.2	____ **Angle Theorem**: The measure of an ____ angle is ____ the measure of the ____ angle that defines the same arc.	 $m\angle BCA = \frac{1}{2}m\angle BOA$
Theorem G.7.3	A ____ is ____ to a ____ if and only if it is ____ to the radius drawn to the point of ____.	

2020 Geometry Reference Chart

Theorem G.7.5	The 3 ____of the sides of a triangle meet at a single ____, called the triangle's ____. This point is the ____of the triangle's ____.	
Theorem G.7.7	The 3 ____of a triangle meet at a single ____, called the triangle's . This point is the ____of the triangle's ____.	
Theorem G.7.8	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 G.7.11	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, ____.