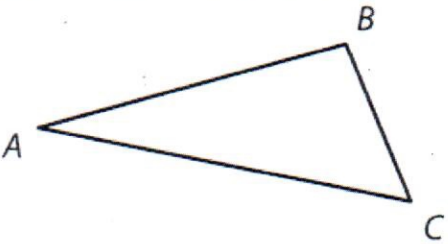
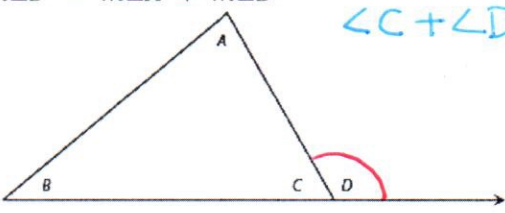
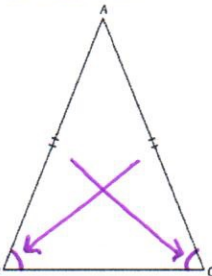
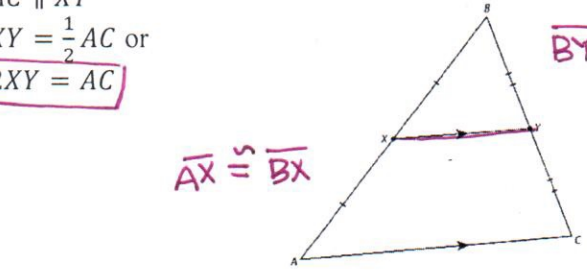
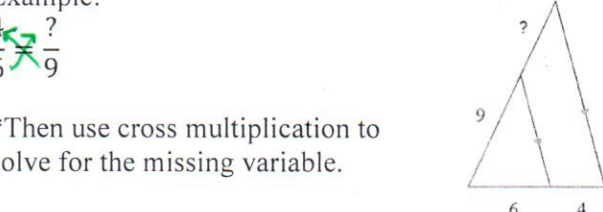
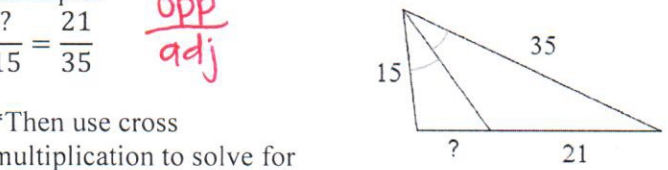


<p>Triangle Sum Theorem: all angles add up to 180°</p>	<p>$m\angle A + m\angle B + m\angle C = 180^\circ$</p> 
<p>Triangle Exterior Angle Theorem: The exterior angle is equal to the sum of the opposite interior angles.</p>	<p>$m\angle D = m\angle A + m\angle B$</p> <p>$\angle C + \angle D = 180^\circ$</p> 
<p>Isosceles Triangle Theorem: If two sides are \cong, then the angles opposite the two sides are \cong.</p>	<p>$m\angle B \cong m\angle C$</p>  <p>$\overline{AB} \cong \overline{AC}$</p>
<p>Triangle Midsegment Theorem: a midsegment of a \triangle is parallel to the opposite side.</p>	<p>$\overline{AC} \parallel \overline{XY}$ $XY = \frac{1}{2}AC$ or $2XY = AC$</p>  <p>$\overline{AX} \cong \overline{BX}$</p> <p>$\overline{BY} \cong \overline{CY}$</p>
<p>Triangle Proportionality Theorem: if two lines in a \triangle are parallel the inside line makes the two \triangle's proportionate.</p>	<p>Example: $\frac{4}{6} = \frac{?}{9}$</p> <p>*Then use cross multiplication to solve for the missing variable.</p> 
<p>Triangle Angle Bisector Theorem: The angle bisector divides the \triangle into proportionate pieces.</p>	<p>Example: $\frac{?}{15} = \frac{21}{35}$</p> <p><i>opp adj</i></p> <p>*Then use cross multiplication to solve for the missing variable.</p> 

Definitions:

<p>Quadrilateral: polygon w/4 sides</p> <p>Parallelogram: opposite sides are parallel</p> <p>Rectangle: parallelogram with right angles.</p> <p>Rhombus: parallelogram with 4 congruent sides.</p> <p>Square: combine rectangle & rhombus</p>	<p>Quadrilaterals by definitions.</p>
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Theorems

<p>If a quadrilateral is a parallelogram, opposite sides are</p> <p>CONGRUENT (and parallel)</p>	<p>$\overline{AB} \cong \overline{DC}$ and $\overline{AD} \cong \overline{BC}$</p>
<p>If a quadrilateral is a parallelogram, opposite angles are</p> <p>CONGRUENT</p>	<p>$m\angle A \cong m\angle C$ and $m\angle B \cong m\angle D$</p>
<p>If a quadrilateral is a parallelogram, then its diagonals</p> <p>BISECT EACH OTHER</p>	<p>$\overline{AP} \cong \overline{PC}$ and $\overline{DP} \cong \overline{PB}$</p>
<p>If a quadrilateral is a parallelogram, then consecutive angles are</p> <p>(same side)</p> <p>SUPPLEMENTARY</p>	<p> $m\angle A + m\angle B = 180$ $m\angle B + m\angle C = 180$ $m\angle C + m\angle D = 180$ $m\angle D + m\angle A = 180$ </p>

2.4 Coordinate Geometry

Side Lengths

Find side lengths of a triangle or quadrilateral using the Pythagorean Theorem: $a^2 + b^2 = c^2$

Angles

Determine if angles are right angles (90°) by finding slopes and determining if slopes are opposite reciprocals.

a is the opposite reciprocal of $-\frac{1}{a}$

0 is the opposite reciprocal of undefined

slopes are the same? lines are parallel