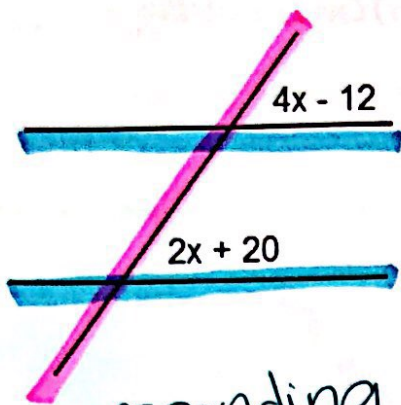


8.4 GUIDED NOTES: Parallel Lines and Transversals

<p>Parallel Lines Transversal</p>	<p>Corresponding Angles - angles in the same position on different parallel lines</p> <p>congruent (\cong)</p>
<p>Alternate Interior Angles - angles between the parallel lines and on different sides of the transversal</p> <p>congruent (\cong)</p>	<p>Alternate Exterior Angles - angles outside the parallel lines and on different sides of the transversal</p> <p>congruent (\cong)</p>
<p>Same-Side Interior Angles - angles between the parallel lines and on the same side of the transversal</p> <p>supplementary (+ to 180)</p>	<p>Same-Side Exterior Angles - angles outside the parallel lines and on the same side of the transversal</p> <p>supplementary (+ to 180)</p>

EX1.



corresponding

$$4x - 12 = 2x + 20$$

$$+12 \quad +12$$

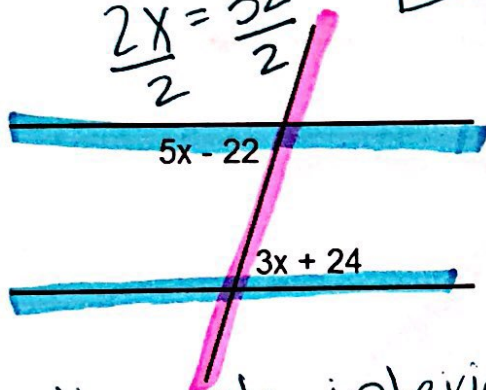
$$4x = 2x + 32$$

$$-2x \quad -2x$$

$$x = 16$$

$$\frac{2x}{2} = \frac{32}{2}$$

EX3.



alternate interior

$$5x - 22 = 3x + 24$$

$$+22 \quad +22$$

$$5x = 3x + 46$$

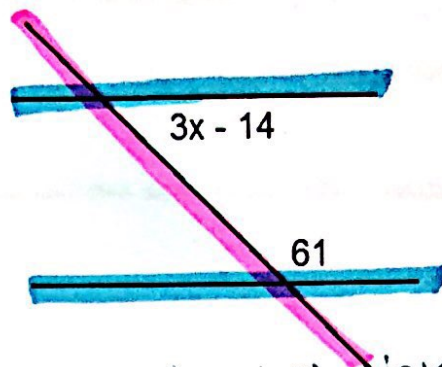
$$-3x \quad -3x$$

$$2x = 46$$

$$\frac{2x}{2} = \frac{46}{2}$$

$$x = 23$$

EX2.



same-side interior

$$3x - 14 + 61 = 180$$

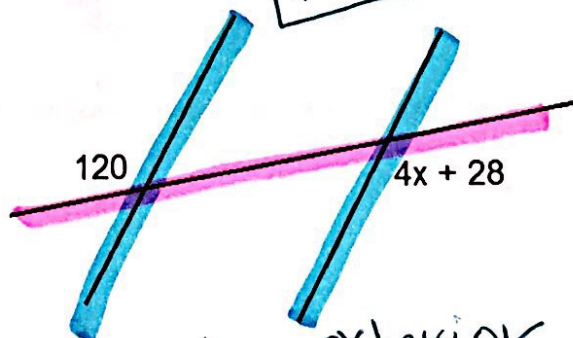
$$3x + 47 = 180$$

$$-47 \quad -47$$

$$\frac{3x}{3} = \frac{133}{3}$$

$$x = 44.33$$

EX4.



alternate exterior

$$120 = 4x + 28$$

$$-28 \quad -28$$

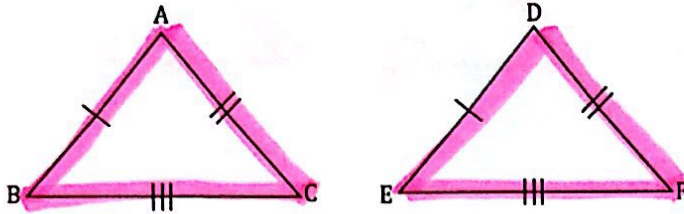
$$\frac{92}{4} = \frac{4x}{4}$$

$$x = 23$$

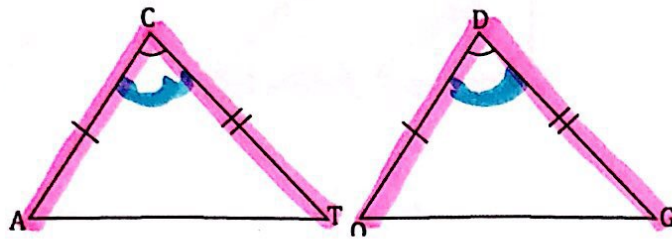
Side 8.5 GUIDED NOTES: Triangle Congruence Theorems angle

The triangle congruence theorems are ways to prove that triangles are congruent by using information about some of their pieces.

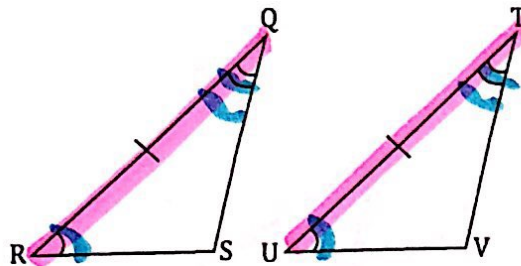
Side, Side, Side (SSS) – all three sides of one triangle are congruent to all three sides of the other triangle



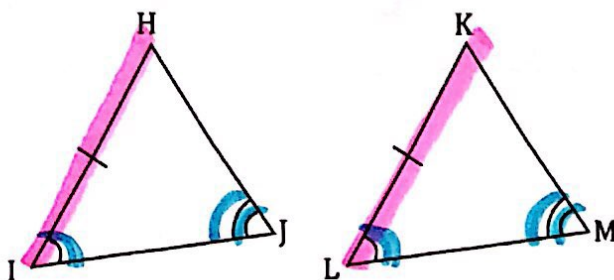
Side, Angle, Side (SAS) – two sides and the angle between them of one triangle are congruent to two sides and the angle between them of the other triangle



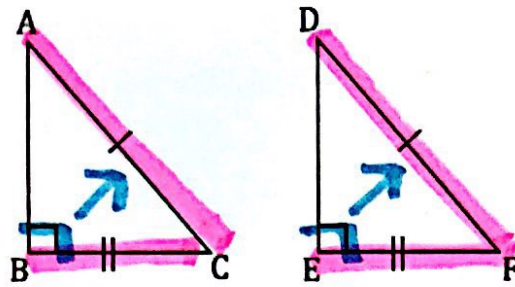
Angle, Side, Angle (ASA) – two angles and the side between them of one triangle are congruent to two angles and the side between them of the other triangle



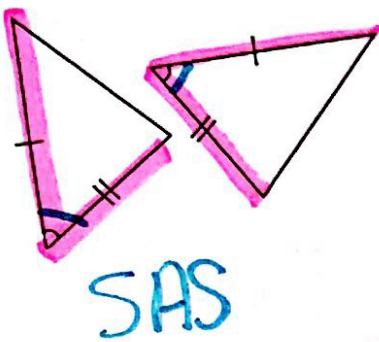
Angle, Angle, Side (AAS) – two angles and a side not between them of one triangle are congruent to two angles and a side not between them of the other triangle



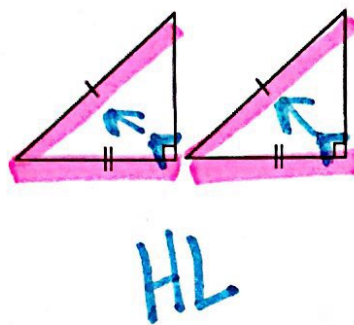
Hypotenuse, Leg (HL) – the hypotenuse and a leg of one right triangle are congruent to the hypotenuse and a leg of the other right triangle



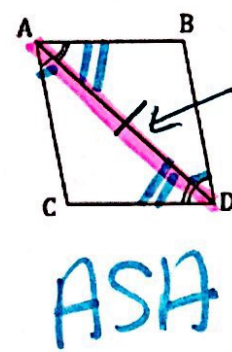
EX1



EX2

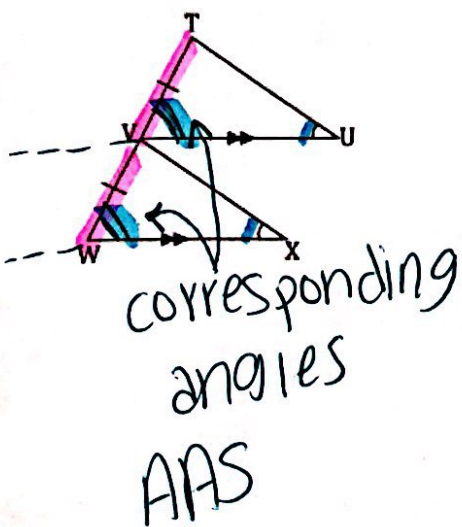


EX3

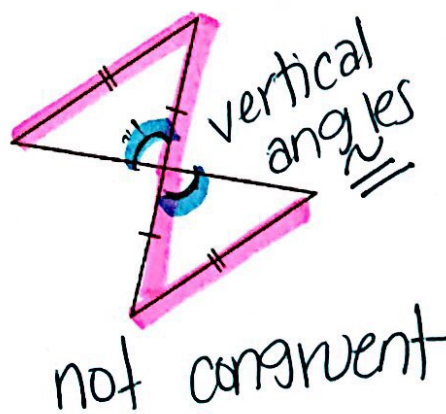


\overline{AD} is \cong to itself (reflexive property)

EX4



EX5



EX6

