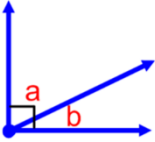
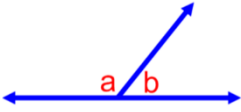
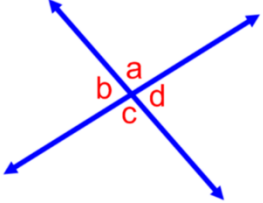
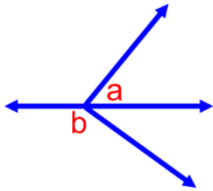
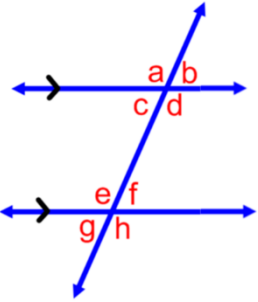
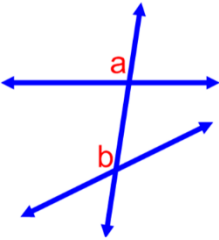
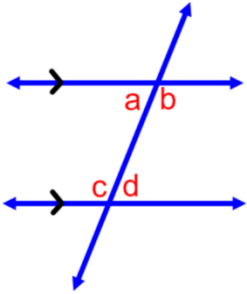


ANGLE RELATIONSHIPS TOOLKIT

<p style="text-align: center;">Right Angle Pair</p>  <ul style="list-style-type: none"> • <u>Complementary</u> • add up to 90 • $a + b = 90$ 	<p style="text-align: center;">Straight Angle Pair</p>  <ul style="list-style-type: none"> • <u>Supplementary</u> • add up to 180 • $a + b = 180$
<p style="text-align: center;">Vertical Angles</p>  <ul style="list-style-type: none"> • <u>across from each other</u> when 2 straight lines cross • $a = c$ • $b = d$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>VERTICAL \sphericalangle'S ARE ALWAYS \cong</p> </div>	<p style="text-align: center;"><u>NOT</u> Vertical Angles</p>  <ul style="list-style-type: none"> • <u>NOT 2 straight</u> lines crossing • a and b are not \cong
<p style="text-align: center;">Corresponding Angles</p>  <ul style="list-style-type: none"> • in the <u>same position</u> (like top left) <u>when translated</u> along a transversal • $a = e$ • $b = f$ • $c = g$ • $d = h$ <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>IF \parallel, THEN CORRESPONDING \sphericalangle'S \cong</p> </div>	<p style="text-align: center;"><u>Also</u> Corresponding Angles</p>  <ul style="list-style-type: none"> • <u>still</u> corresponding \sphericalangle's, • not \cong (lines not parallel)

Alternate Interior Angles

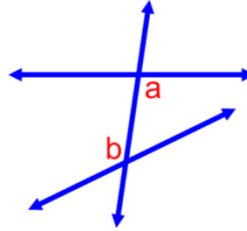


- between 2 lines, on opposite sides of the transversal

- $a = d$ • $b = c$

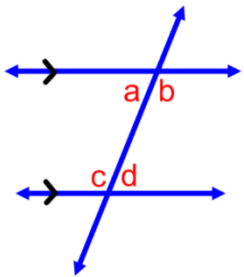
IF \parallel , THEN ALTERNATE INTERIOR \angle 'S \cong

Also Alternate Interior Angles



- still alternate interior \angle 's,
- not \cong (lines not parallel)

Same-Side Interior Angles

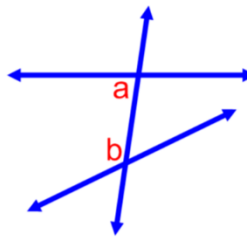


- between 2 lines, on the same side of the transversal

- $a + c = 180$ • $b + d = 180$

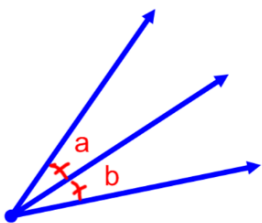
IF \parallel , THEN SAME-SIDE INTERIOR \angle 'S ARE SUPPLEMENTARY.

Also Same-Side Interior Angles



- still same-side interior \angle 's
- not supplementary (lines not parallel)

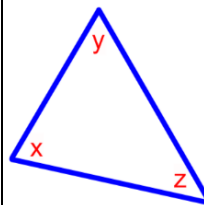
Adjacent Congruent Angles



- When an \angle is bisected, it creates a pair of adjacent \cong \angle 's

- $a = b$

Triangle-Angle Sum Theorem



- the 3 \angle 's in a triangle add up to 180
- $x + y + z = 180$