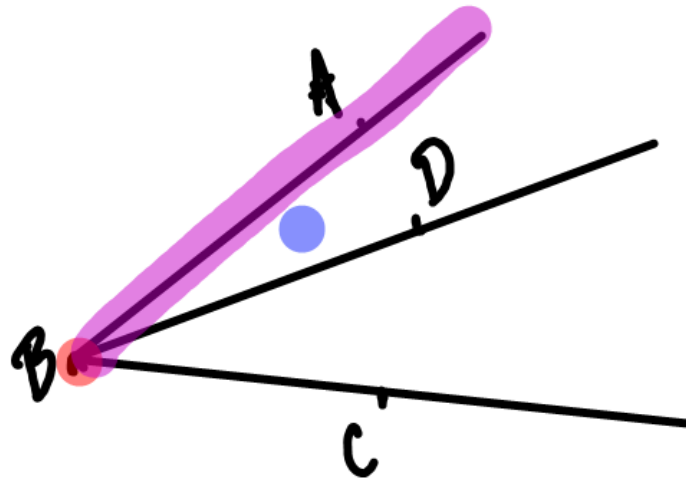
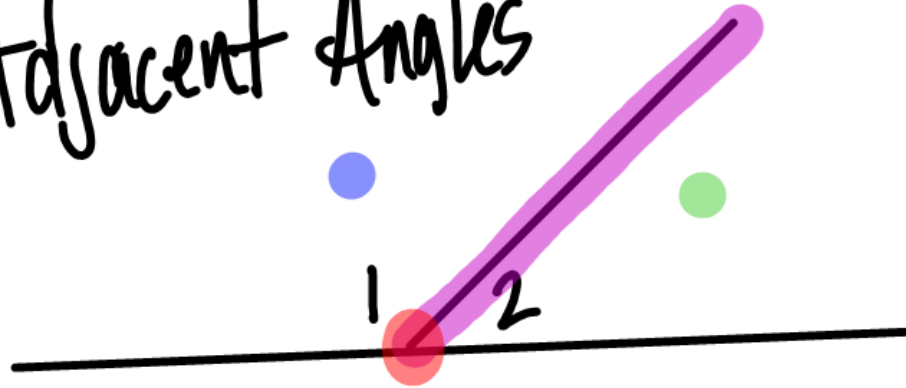


Adjacent Angles



$\angle ABC$
 $\angle ABD$
Not Adjacent



Biconditional statement contains
works if and only if

Conditional if p then q

Converse if q then p

Counterexample statement
that shows conditional is false
ex. sidewalk wet

Conclusion if p then q

Deduction facts

Deductive Reasoning

Inductive Reasoning observation

Equivalence

Reflexive Property $a = a$

Symmetric Property
if $a = b$ then $b = a$

Transitive Property
if $a = b$ and $b = c$ then $a = c$

Hypothesis if p then q

All Thunderhawk fans wear blue.

If you are a Thunderhawk fan then
you wear blue.

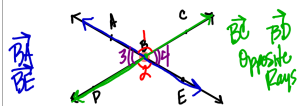
Logical Chain series of statements
linking conclusions to hypotheses

Paragraph Proof Paragraph form

Two Column Proof
statements Reasons

Theorem statements can prove

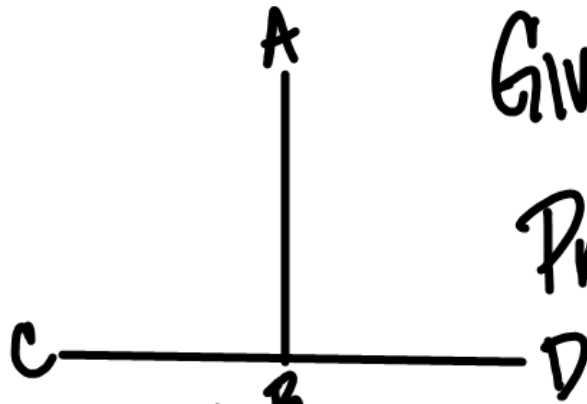
Vertical Angles $\angle 3 \cong \angle 4$
 $\angle 1 \cong \angle 2$



Vertical \angle s are \cong .

$$\frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \frac{1}{16}, \frac{1}{32}, \frac{1}{64}$$

Conjecture



Given. $\overline{AB} \perp \overline{CD}$

Prove $m\angle ABD = m\angle ABC$

Statements

1. $\overline{AB} \perp \overline{CD}$
2. $m\angle ABD = 90$

3. $m\angle ABC = 90$

4. $m\angle ABD = m\angle ABC$

Reasons

1. Given

2. Definition of \perp Lines

3. Definition of \perp Lines

4. Substitution or Transitive Property