Chapter 6 Summary - Quadrilaterals

Quadrilateral

Kite   Trapezoid   Parallelogram

Isosceles Trapezoid   Rect.   Rhombus
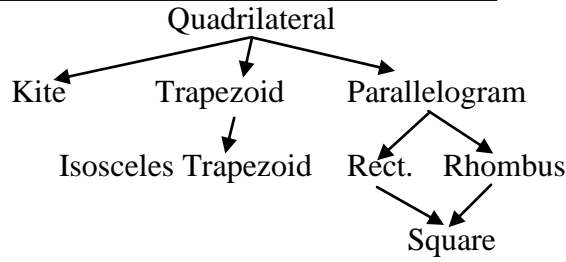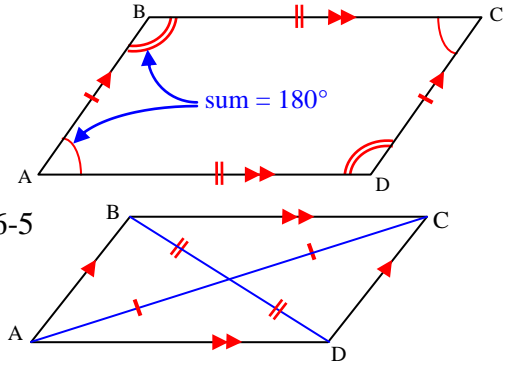
Square

Parallelogram

Thm 6-1 → para. iff **both pair opp. sides** $\cong$ ← Thm 6-7
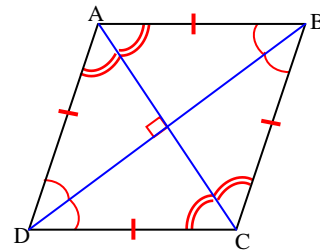Thm 6-2 → para. iff **both pair opp. $\angle$'s** $\cong$ ← Thm 6-8
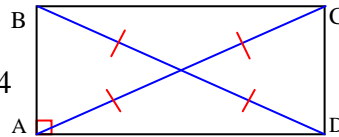Thm 6-3 → para. iff **both pair diags bisect ea other** ← Thm 6-5

sum = 180°

Rhombus

Thm 6-9: rhomb *iff* **ea diag. bisects 2 $\angle$'s** ← Thm 6-12
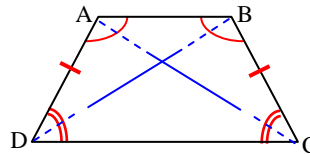Thm 6-10: rhomb *iff* **diags are** $\perp$ ← Thm 6-13

Rectangle

Thm 6-11: Rect *iff* **diags are** $\cong$ ... $\overline{AC} \cong \overline{BD}$ ← Thm 6-14
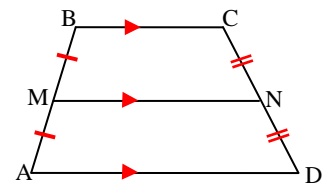
Isosceles Trapezoid

Thm 6-15: Isos Trap *iff* **base $\angle$'s** $\cong$ ← Thm 6-16

Any Trapezoid

Thm 6-18: Trapezoid midsegment:

- $\parallel$ to both bases ($\overline{MN} \parallel \overline{AD}$ & $\overline{MN} \parallel \overline{BC}$)

- Len = ½ sum len of bases ... $MN = \dfrac{1}{2}(AD + BC)$

Thm 6-4: If ≥ 3 $\parallel$ lines cut off $\cong$ segs on 1 transversal, does the same on all transversals.

Kite

Thm 6-17: Diags are $\perp$