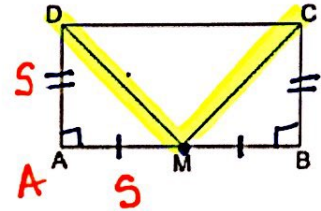


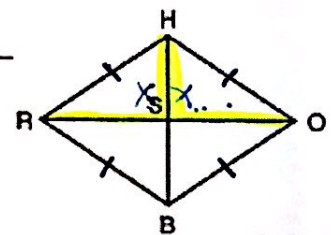
GUIDED NOTES: Proofs with Quadrilaterals

EX1. Given $\square ABCD$ is a Rectangle.
 M is the Midpoint of AB
 Prove $DM \cong CM$



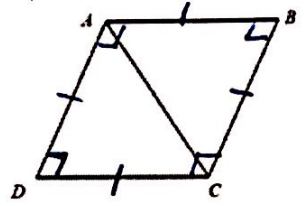
Statement	Reason
1. $ABCD$ is a Rectangle	1. Given
2. M is the midpoint of \overline{AB}	2. Given
3. $\angle A$ and $\angle B$ are Right Angles <small>and \cong</small>	3. Def. of a Rectangle
4. $AM \cong MB$	4. Def. of midpoint
5. $AD \cong BC$	5. opp sides \cong Prop.
6. $\triangle DAM \cong \triangle CBM$	6. SAS
7. $DM \cong CM$	7. CPCTC

EX2. Given $\square BRHO$ is a Parallelogram.
 $BR \cong BO$
 Prove $\angle HSR \cong \angle HSO$



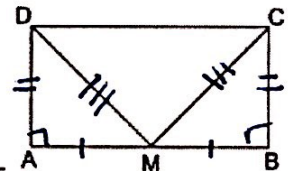
Statement	Reason
1. $BRHO$ is a parallelogram	1. Given
2. $\overline{BR} \cong \overline{BO}$	2. Given
3. $OB \cong HR$	3. Opp sides \cong Prop.
4. $RB \cong HO$	4. Opp. sides \cong Prop.
5. $BRHO$ is a Rhombus	5. All sides are congruent.
6. $\angle HSR$ & $\angle HSO$ are 90°	6. Diagonals \perp bisectors Prop.
7. $\angle HSR \cong \angle HSO$	7. Def. \cong

EX3. Given $\square ABCD$ is a Parallelogram.
 $\angle ADC$ is a Right Angle
 $AD \cong DC$
 Prove $\square ABCD$ is a Square



Statement	Reason
1. $ABCD$ is a parallelogram	1. Given
2. $\angle ADC$ is a right angle	2. Given
3. $\overline{AD} \cong \overline{DC}$	3. Given
4. $\angle ABC \cong \angle ADC \cong \angle DAB \cong \angle BCD$	4. At least 1 right angle, all right angles Prop.
4. $AD \cong BC$	4. opp sides \cong Prop.
5. $AB \cong DC$	5. Opp sides \cong Prop.
6. $\square ABCD$ is a Square	6. Def. Square

EX4. Given $\square ABCD$ is a Rectangle
 $AM \cong MB$
 Prove $\triangle DMC$ is an Isosceles Triangle



Statement	Reason
1. $ABCD$ is a rectangle	1. Given
2. $\overline{AM} \cong \overline{MB}$	2. Given
3. $AD \cong CB$	3. Opp sides \cong Prop.
4. $\angle A$ & $\angle B$ are 90° & \cong	4. Rectangles have 4 right angles
4. $\triangle DAM \cong \triangle CBM$	4. SAS
5. $DM \cong MC$	5. CPCTC
6. $\triangle DMC$ is an Isosceles Triangle	6. An Isosceles have 2 congruent sides.