1. Given Quadrilateral ABCD has the following vertices:

$A(4,8)\ B(5,1)\ C(0,-4)\ D(-1,3)$

Use the distance formula to find the length of all four sides:

$AB = \underline{}$ $BC = \underline{}$ $CD = \underline{}$ $DE = \underline{}$

$\sqrt{50}$ $\sqrt{50}$ $\sqrt{50}$ $\sqrt{50}$

Square

Rhombus

What kind of quadrilateral is this?

$\begin{array}{cc} AB & BC \\ \dfrac{7}{-1} & 1 \end{array}$

2. Is each biconditional true? If not, explain why.

a) Two lines are perpendicular if and only if they intersect

TRUE   If two lines are $\perp$, then they intersect.

b) An angle is a straight angle if and only if it has a measure of $180°$.

TRUE

3. Use this true statement: If two lines are parallel, then they have the same slope.
a. Write the converse of this statement.

If two lines have the same slope, then they are ll.

b. Is the converse true?   If no, give a counterexample

NO   *two lines can be the same*

If yes, write the biconditional formed by the original conditional and its converse.

4. Use this true statement: If a number is odd, then both of its factors are odd.
a. Write the converse of this statement.

If a #'s factors are odd, then the # is odd.

b. Is the converse true?   If no, give a counterexample

yes.

If yes, write the biconditional formed by the original conditional and its converse.
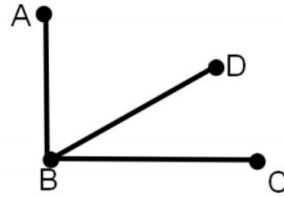
A # is odd iff its 2 factors are odd.

1. $\overline{AB}$ and $\overline{CB}$ are Perpendicular

∠ABC IS a RT∠.
= 90°

A

D

B   C

∠ABD + ∠DBC = ∠ABC

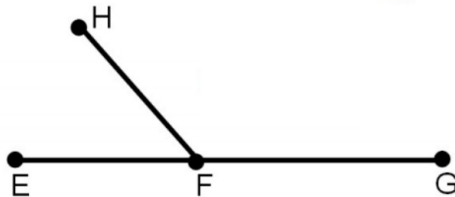2. K is the midpoint of $\overline{RS}$

R   K   S

∠RKS = 180
$\overline{RK} \cong \overline{KS}$
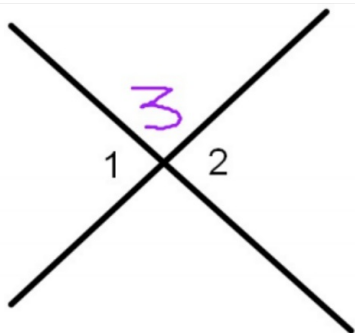$\overline{RK} + \overline{KS} = \overline{RS}$

3.

H

E   F   G

∠EFH + ∠HFG = 180
SUPP.

4. Angles 1 and 2 are supplementary

$$\angle 1 + \angle 2 = 180$$

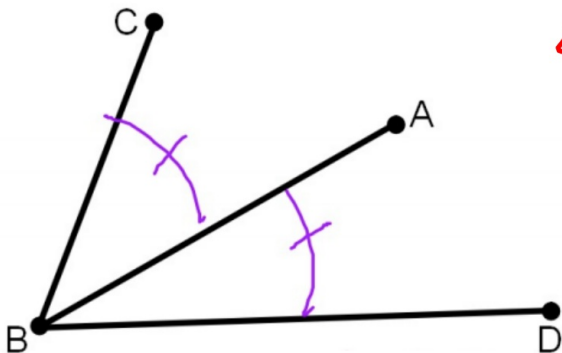5. Angles 3 and 4 are complementary

$$\angle 3 + \angle 4 = 90$$

6.

$\angle 1 \cong \angle 2$ bc they are vert. $\angle$'s.

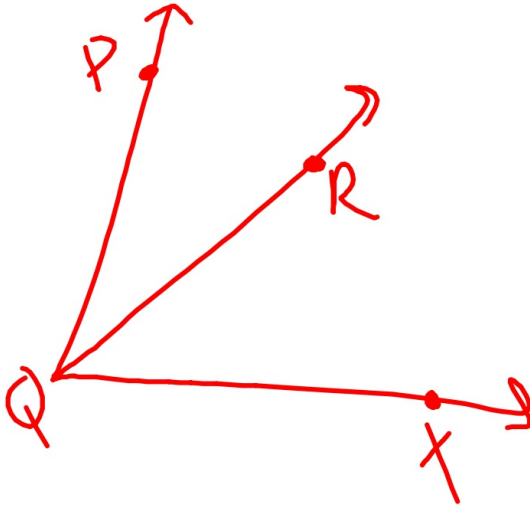$\angle 1 \& \angle 3$ are supp.
$= 180$
$\angle 2 \& \angle 3 = 180$

7. $\overline{AB}$ bisects angle CBD
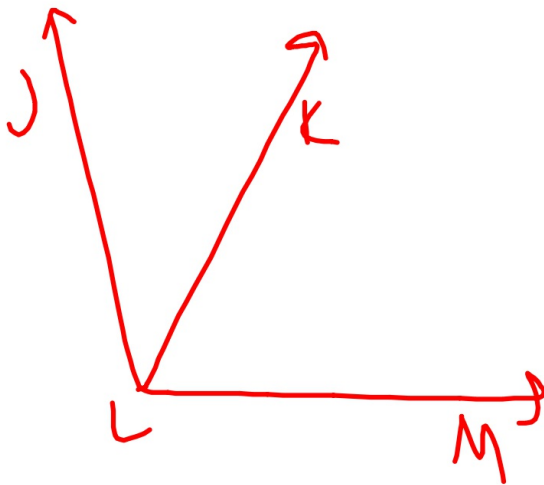

$\angle CBA \cong \angle ABD$
$\angle CBA + \angle ABD = \angle CBD.$
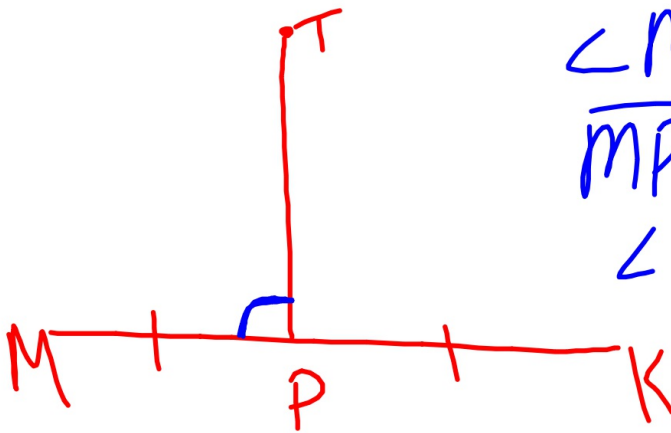
8. Angles PQR and RQX are adjacent angles.

$\angle PQR + \angle RQX$
$= \angle PQX.$

9. Angles JLK and KLM are a (linear pair.)

$\angle JLK + \angle KLM$
$= \angle JLM$

10. $\overline{PT}$ is the perpendicular bisector of $\overline{MK}$

$\angle MPT = 90$

$\overline{MP} \cong \overline{PK}$

$\angle MPT + \angle TPK = 180$

$\angle MPK$

Classwork: Review Sections 2.1, 2.2, 2.4

IXL #5 - I.2 & I.3 due Friday, Oct. 5th!