

Worksheet 1

1.

	Statement	Reason
1	$V \parallel W$	Given
2	$\angle 2 \cong \angle 3$	Given
3	$\angle 1 \cong \angle 2$	alt. int $\angle s \cong$
4	$\angle 1 \cong \angle 3$	Trans. prop. of \cong

2.

	Statement	Reason
1	$\overline{OP} \parallel \overline{OR}$	Given
2	\overline{OP} bisects $\angle AOB$	Given
3	\overline{OR} bisects $\angle BOC$	Given
4	$\angle 2 \cong \angle 3$	alt. int. $\angle s \cong$
5	$\angle 1 \cong \angle 2$	def. of \angle bisector
6	$\angle 3 \cong \angle 4$	def. of \angle bisector
7	$\angle 1 \cong \angle 4$	Trans. prop. of \cong

3.

	Statement	Reason
1	$AB \parallel ED$	Given
2	$\angle 4 \cong \angle 5$	Given
3	$\angle 1 \cong \angle 5$	Corresp. $\angle s \cong$
4	$\angle 2 = \angle 4$	Alt. int. $\angle s \cong$
5	$\angle 1 \cong \angle 2$	Trans. prop of \cong

4.

	Statement	Reason
1	$\overline{AB} \parallel \overline{BE}$	Given
2	$\angle 1 \cong \angle 8$	Given
3	$\angle 1 \cong \angle 4$	corresp. $\angle s \cong$
4	$\angle 3 \cong \angle 8$	Alt. Int $\angle s \cong$
5	$\angle 6 \cong \angle 3$	vertical $\angle s \cong$
6	$\angle 6 \cong \angle 4$	Trans prop of \cong

5

	Statement	Reason
1	$\overline{AB} \parallel \overline{FE}$	Given
2	$\overline{BC} \parallel \overline{DF}$	Given
3	$\angle 1 \cong \angle 2$	alt int $\angle s \cong$
4	$\angle 2 \cong \angle 3$	alt int $\angle s \cong$
5	$\angle 1 \cong \angle 3$	Trans prop of \cong

Parallel Line Proofs #4

1

	State	Reasons
1.	$\overline{BC} \parallel \overline{AE}$	Given
2.	$\angle 1 \cong \angle 3$	Given
3.	$\angle 2 \cong \angle 3$	ALT. int \angle s \cong
4.	$\angle 1 \cong \angle 2$	Trans. prop of \cong
5.	$\overline{BA} \parallel \overline{CD}$	since corresponding \angle s \cong

2.

	Statements	Reasons
1.	\overline{NY} bisects $\angle XNT$	Given
2.	$\angle 1 \cong \angle 2$	Given
3.	$\angle 1 \cong \angle 3$	def of \angle bisection
4.	$\angle 2 \cong \angle 3$	Trans prop of \cong
5.	$\overline{XY} \parallel \overline{NT}$	since alt. int \angle s \cong

3

	Statements	Reasons
1.	$\angle 1 \cong \angle 2$	Given
2.	$\angle 3 \cong \angle 4$	Given
3.	$\angle 2 \cong \angle 3$	Vertical \angle s \cong
4.	$\angle 1 \cong \angle 4$	Trans prop of \cong
5.	$\overline{XY} \parallel \overline{AB}$	since alt int \angle s \cong

4

	Statements	Reasons
1.	$\overline{AE} \parallel \overline{BF}$	Given
2.	$\angle 1 \cong \angle 3$	Given
3.	$\angle 1 \cong \angle 2$	corresp. \angle s \cong
4.	$\angle 2 \cong \angle 3$	Transitive
5.	$\overline{AB} \parallel \overline{EF}$	since alt int \angle s \cong

5

	Statements	Reasons
1.	$\angle 1 \cong \angle 2$	Given
2.	$\angle 3 \cong \angle 4$	Given
3.	$b \parallel c$	since corresp \angle s \cong
4.	$c \parallel d$	since alt int \angle s \cong
5.	$b \parallel d$	Trans. prop of \cong