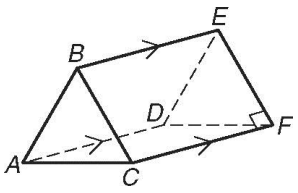
Name _____ HW #_____Period_____Column_____

Geometry Worksheet 3-1

For Exercises 1–4, identify each of the following in the figure.

1. a pair of parallel segments
2. a pair of skew segments
3. a pair of perpendicular segments
4. a pair of parallel planes



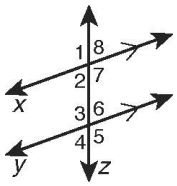
_____

_____

_____

_____

In Exercises 5–10, give one example of each from the figure.



5. a transversal

_____

6. parallel lines

_____

7. corresponding angles

_____

8. alternate interior angles

_____

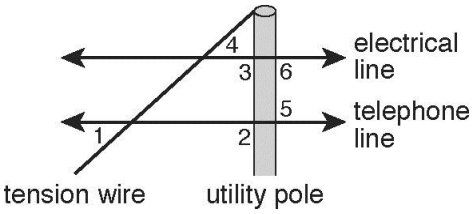
9. alternate exterior angles

_____

10. same-side interior angles

_____

Use the figure for Exercises 11–14. The figure shows a utility pole with an electrical line and a telephone line. The angled wire is a tension wire. For each angle pair given, identify the transversal and classify the angle pair. (*Hint:* Think of the utility pole as a line for these problems.)



11. ∠5 and ∠6

_____

_____

12. ∠1 and ∠4

_____

_____

13. ∠1 and ∠2

_____

_____

14. ∠5 and ∠3

_____

_____

Name _____ Date _____ Class _____

Answers for the chapter Parallel and Perpendicular Lines

LINES AND ANGLES

Practice A

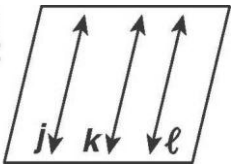
1. Skew
2. intersect
3. 90° or right
4. Parallel
5. $\overline{AC} \perp \overline{EG}$
6. $\overline{AC}$ and $\overline{Dh}$ are skew.
7. $\overline{CG} \perp \overline{EG}$
8. plane *ABD* || plane *EFH*
9. lines
10. Corresponding
11. outside
12. Alternate
13. same
14. line *r*
15. ∠1 and ∠3 or ∠2 and ∠4
16. ∠2 and ∠3
17. ∠1 and ∠4

Practice B

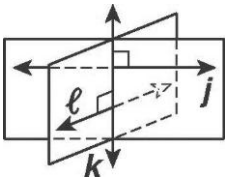
1. $\overline{BE} \perp \overline{AD}$
2. $\overline{AB}$ and $\overline{CF}$ are skew.
3. $\overline{CF} \perp \overline{EF}$
4. plane *ABC* || plane *DEF*
5. line *z*
6. lines *x* and *y*
7. Sample answer: ∠1 and ∠3
8. Sample answer: ∠2 and ∠6
9. Sample answer: ∠1 and ∠5
10. Sample answer: ∠2 and ∠3
11. transv.: utility pole; same-side interior angles
12. transv.: tension wire; alternate exterior angles
13. transv.: telephone line; corresponding angles
14. transv.: utility pole; alternate interior angles

Practice C

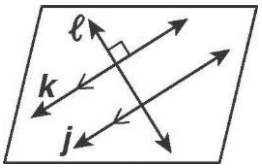
1. Sample answer:



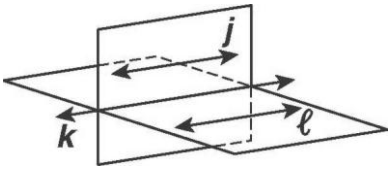
Lines *j* and ℓ are parallel.

2. 

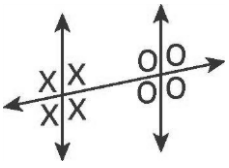
Lines *j* and ℓ are skew.

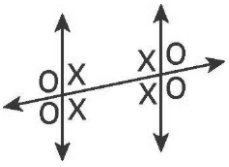
3. 

Lines *j* and ℓ are perpendicular.

4. 

Lines *j* and ℓ are parallel.

5. *X* = 10; *O* = 10
6. *X* = 40; *O* = 70
7. 

8. 

Reteach

1. *g* || *h*
2. *j* and *h*
3. *j* ⊥ *g*
4. Possible answers: $\overline{EH}$ or $\overline{FJ}$