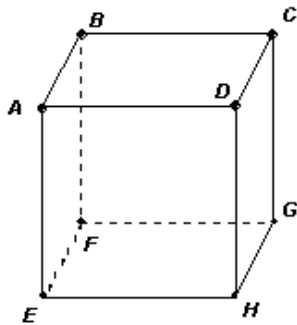


**Geometry Ch. 3 Review (3.1-3.4) Busch/Newgard. Show your work!**

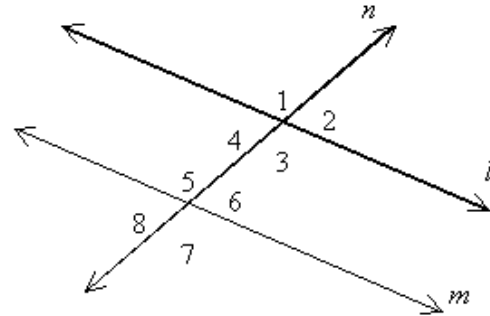
1. Two lines that are not coplanar and do not intersect are called \_\_\_\_\_.
  - a. Parallel
  - b. oblique
  - c. perpendicular
  - d. skew lines

Use the figure below.



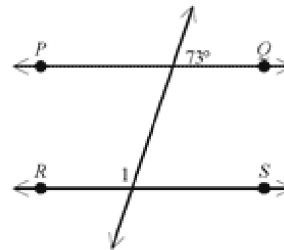
2. For the cube shown,  $\overleftrightarrow{AD}$  and  $\overleftrightarrow{HG}$  are \_\_\_\_\_.
  - a. parallel lines
  - b. oblique lines
  - c. skew lines
  - d. perpendicular lines
  
3. According to the Parallel Postulate, if there is a line and a point not on the line, then how many parallels to the given line can be drawn through the point?

4. In the figure,  $\angle 6$  and  $\angle 3$  are \_\_\_\_\_.



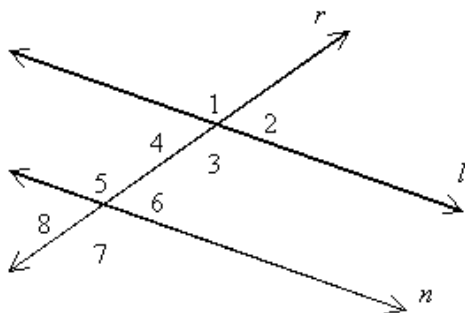
- a. alternate exterior angles
- b. consecutive interior angles
- c. corresponding angles
- d. alternate interior angles

5. Find  $m\angle 1$  in the figure below.  $\overleftrightarrow{PQ}$  and  $\overleftrightarrow{RS}$  are parallel.



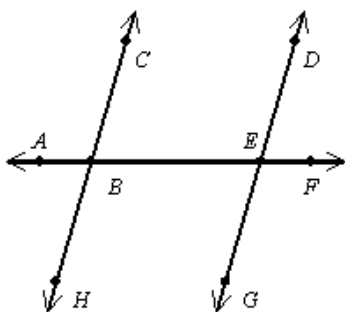
- a.  $17^\circ$
- b.  $73^\circ$
- c.  $97^\circ$
- d.  $107^\circ$

6. In the figure,  $l \parallel n$  and  $r$  is a transversal. Which of the following is not necessarily true?



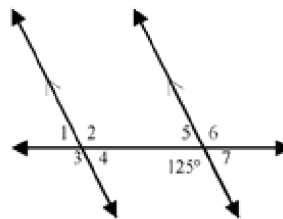
- a.  $\angle 8 \cong \angle 2$
- b.  $\angle 2 \cong \angle 6$
- c.  $\angle 5 \cong \angle 3$
- d.  $\angle 7 \cong \angle 4$

7. In the figure shown,  $\overleftrightarrow{HC} \parallel \overleftrightarrow{GD}$  and  $m\angle ABC = 105^\circ$ . Which of the following statements is false?



- a.  $m\angle DEF = 75^\circ$
- b.  $\angle ABH$  and  $\angle AEG$  are corresponding angles.
- c.  $\angle HBF$  and  $\angle AED$  are alternate interior angles.
- d.  $m\angle GEF = 75^\circ$

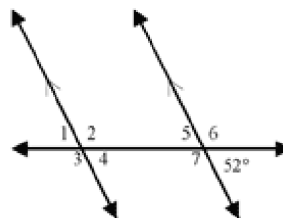
8. Use the figure to find the measure of  $\angle 6$ .



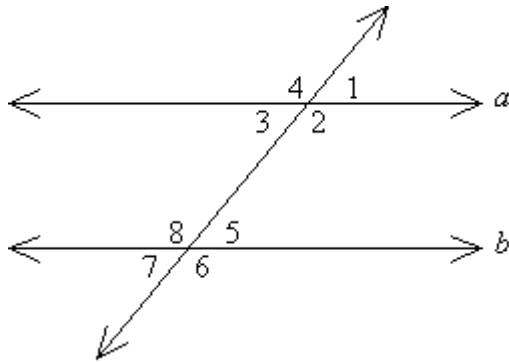
- a.  $125^\circ$
- b.  $80^\circ$
- c.  $55^\circ$
- d.  $145^\circ$

True or False:

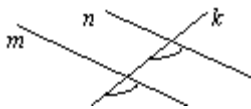
- 9. If two parallel lines are intersected by a transversal, then alternate interior angles are congruent.
- 10. If two parallel lines are intersected by a transversal, then consecutive interior angles are complementary.
- 11. Use the figure to find the measure of  $\angle 1$ .



12. Give a two-column proof of the following.  
**Given:**  $\angle 3 \cong \angle 5$   
**Prove:**  $a \parallel b$

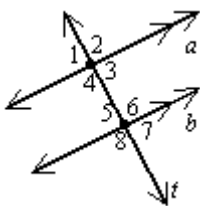


13. Tell whether lines  $m$  and  $n$  are parallel or not parallel and explain.

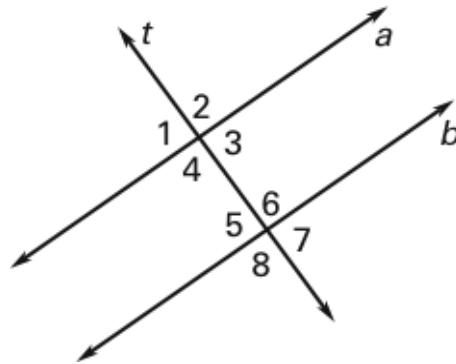


Use the given angle measures to decide whether lines  $a$  and  $b$  are parallel. Write Yes or No.

14.  $m\angle 3 = 93^\circ$ ,  $m\angle 5 = 87^\circ$

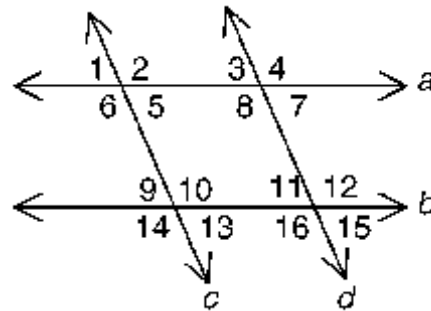


15.  $m\angle 1 = 81^\circ$ ,  $m\angle 6 = 99^\circ$



True or False:

16. If two lines are intersected by a transversal and alternate interior angles are equal in measure, then the lines are parallel.
17. If two lines are intersected by a transversal and corresponding angles are supplementary, then the lines are parallel.
18. Which pair of lines is parallel if  $\angle 4$  is congruent to  $\angle 2$ ?



**Geometry Ch. 3 Review (3.1-3.4) Busch/Newgard. Show your work!****Answer Section**

1. D
2. C
3. Exactly one
4. B
5. D
6. D
7. D
8. A
9. True
10. False
11.  $52^\circ$
12.
  1.  $\angle 3 \cong \angle 5$     1. Given
  2.  $a \parallel b$         2. Alternate Interior Angles Converse
13. parallel; Corresponding Angles Converse
14. No
15. Yes
16. True
17. False
18.  $c$  and  $d$