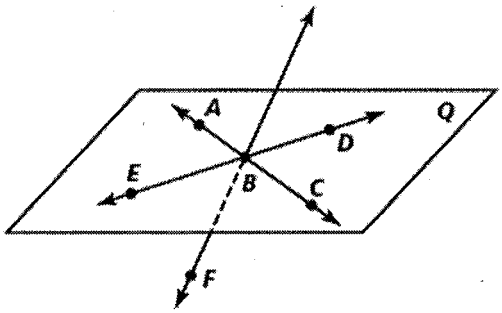
Unit 2 Language of Geometry **Name:** _____

Day 1 to Day 6 Review **Date:** _____ **Hour:** _____

Practice 1-2

Points, Lines, and Planes

Refer to the diagram at the right for Exercises 1–15.



1. Name $\overleftrightarrow{AB}$ in another way.
2. Give two other names for plane Q.
3. Why is EBD not an acceptable name for plane Q?

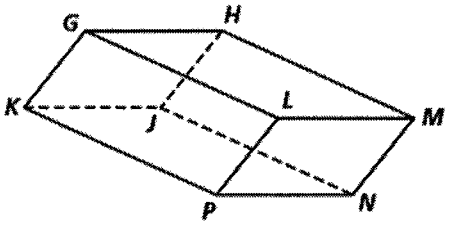
Are the following sets of points collinear?

4. $\overleftrightarrow{AB}$ and C
5. B and F
6. $\overleftrightarrow{EB}$ and A
7. F and plane Q

Are the following sets of points coplanar?

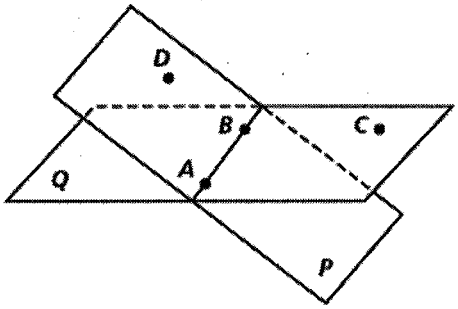
8. E, B, and F
9. $\overleftrightarrow{DB}$ and $\overleftrightarrow{FC}$
10. $\overleftrightarrow{AC}$ and $\overleftrightarrow{ED}$
11. $\overleftrightarrow{AE}$ and $\overleftrightarrow{DC}$
12. F, A, B, and C
13. F, A, B, and D
14. plane Q and $\overleftrightarrow{EC}$
15. $\overleftrightarrow{FB}$ and $\overleftrightarrow{BD}$

Find the intersection of the following lines and planes in the figure at the right.



16. $\overleftrightarrow{GK}$ and $\overleftrightarrow{LG}$
17. planes GLM and LPN
18. planes $GHPN$ and KJP
19. planes HJN and GKL
20. $\overleftrightarrow{KP}$ and plane KJN
21. $\overleftrightarrow{KM}$ and plane GHL

Refer to the diagram at the right.



22. Name plane P in another way.
23. Name plane Q in another way.
24. What is the intersection of planes P and Q?
25. Are A and C collinear?
26. Are D, A, B, and C coplanar?
27. Are D and C collinear?
28. What is the intersection of $\overleftrightarrow{AB}$ and $\overleftrightarrow{DC}$?
29. Are planes P and Q coplanar?
30. Are $\overleftrightarrow{AB}$ and plane Q coplanar?
31. Are B and C collinear?

Practice 1-2

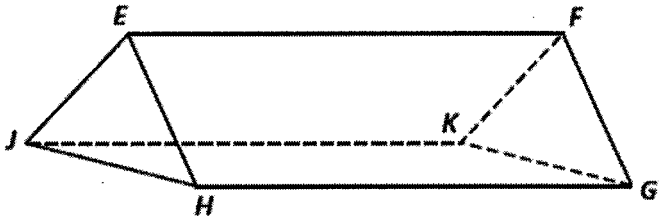
1. $\overleftrightarrow{AC}$ **2.** any two of the following: ABD, DBC, CBE, ABE, ECD, ADE, ACE, ACD **3.** Points E, B, and D are collinear. **4.** yes **5.** yes **6.** no **7.** no **8.** yes **9.** no **10.** yes **11.** yes **12.** yes **13.** no **14.** yes **15.** yes **16.** G **17.** $\overleftrightarrow{LM}$ **18.** $\overleftrightarrow{PN}$ **19.** the empty set **20.** $\overleftrightarrow{KP}$ **21.** M **22.** Sample: plane ABD **23.** Sample: plane ABC **24.** $\overleftrightarrow{AB}$ **25.** yes **26.** no **27.** yes **28.** the empty set **29.** no **30.** yes **31.** yes

Practice 1-3

Write *true* or *false*.

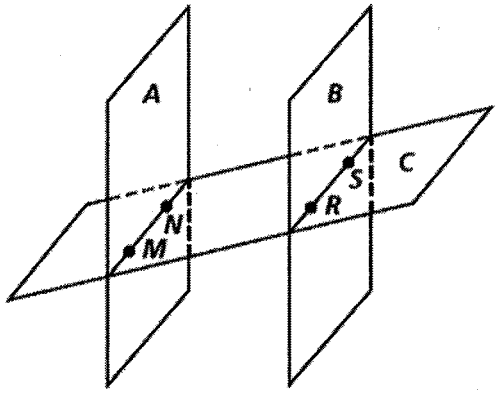
1. $\overleftrightarrow{XY}$ is the same as $\overleftrightarrow{YX}$.
2. $\overrightarrow{XY}$ is the same as $\overrightarrow{YX}$.
3. If $\overrightarrow{AB}$ and $\overrightarrow{AC}$ are opposite rays, then they are collinear.
4. If two rays have the same endpoint, then they form a line.
5. If the union of two rays is a line, then the rays are opposite rays.
6. If $\overrightarrow{PQ}$ and $\overrightarrow{PR}$ are the same rays, then Q and R are the same point.

Refer to the diagram at the right.



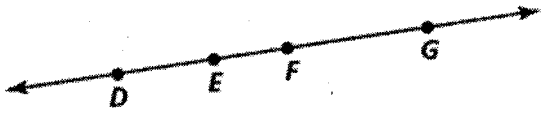
7. Name all segments parallel to $\overline{EF}$.
8. Name all segments parallel to $\overline{FG}$.
9. Name three pairs of skew lines.

Refer to the diagram at the right.



10. Which pair(s) of planes is (are) parallel?
11. Which pair(s) of planes intersect?
12. Which planes intersect in $\overleftrightarrow{MN}$?
13. Which planes intersect in $\overleftrightarrow{RS}$?

Refer to the diagram at the right.



14. Name $\overrightarrow{EF}$ in another way.
15. How many different segments can be named?
16. Name a pair of opposite rays with E as an endpoint.
17. Name in two different ways the ray opposite $\overrightarrow{FG}$.
18. Name $\overrightarrow{GE}$ in two other ways.
19. Are $\overline{EG}$ and $\overline{GE}$ the same segment?

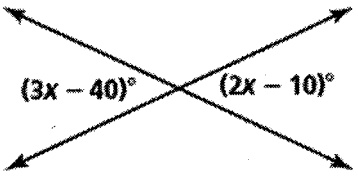
Practice 1-3

1. true **2.** false **3.** true **4.** false **5.** false **6.** false **7.** $\overline{JK}$, $\overline{HG}$ **8.** $\overline{EH}$ **9.** any three of the following pairs: $\overleftrightarrow{EF}$ and $\overleftrightarrow{JH}$; $\overleftrightarrow{EF}$ and $\overleftrightarrow{GK}$; $\overleftrightarrow{HG}$ and $\overleftrightarrow{JE}$; $\overleftrightarrow{HG}$ and $\overleftrightarrow{FK}$; $\overleftrightarrow{JK}$ and $\overleftrightarrow{EH}$; $\overleftrightarrow{JK}$ and $\overleftrightarrow{FG}$; $\overleftrightarrow{EJ}$ and $\overleftrightarrow{FG}$; $\overleftrightarrow{EH}$ and $\overleftrightarrow{FK}$; $\overleftrightarrow{JE}$ and $\overleftrightarrow{KG}$; $\overleftrightarrow{EH}$ and $\overleftrightarrow{KG}$; $\overleftrightarrow{JH}$ and $\overleftrightarrow{KF}$; $\overleftrightarrow{JH}$ and $\overleftrightarrow{GE}$ **10.** planes A and B **11.** planes A and C; planes B and C **12.** planes A and C **13.** planes B and C **14.** Sample: $\overrightarrow{EG}$ **15.** 6 **16.** $\overrightarrow{EF}$ and $\overrightarrow{ED}$ or $\overrightarrow{EG}$ and $\overrightarrow{ED}$ **17.** $\overrightarrow{FE}$, $\overrightarrow{FD}$ **18.** $\overrightarrow{GF}$, $\overrightarrow{GD}$ **19.** yes

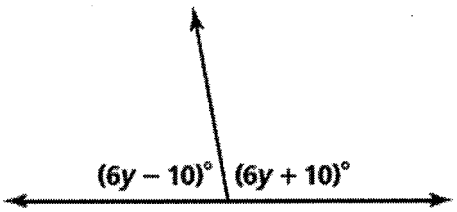
Practice 2-5

Find the values of the variables.

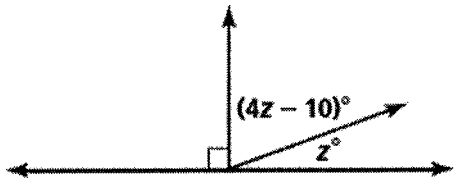
1.



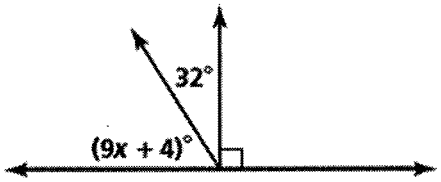
2.



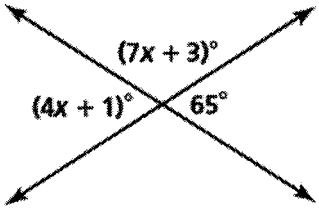
3.



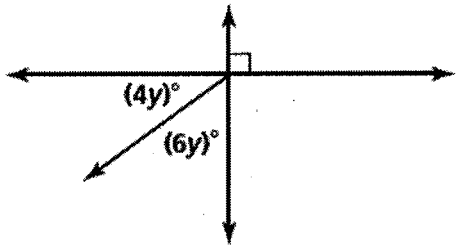
4.



5.

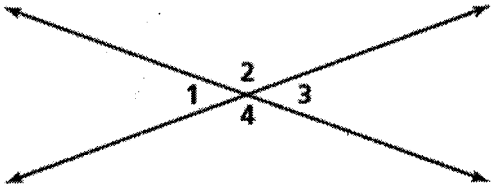


6.



Write *true* or *false*.

7. $\angle 1$ and $\angle 2$ are vertical angles.
8. $\angle 2$ and $\angle 3$ are supplementary angles.
9. $m\angle 1 = m\angle 3$
10. $m\angle 3 + m\angle 4 = 180$
11. $m\angle 1 + m\angle 3 = 180$
12. $\angle 4$ and $\angle 2$ are adjacent angles.

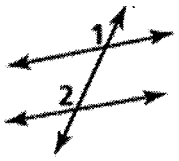


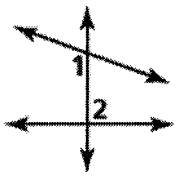
Practice 2-5

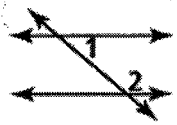
1. 30 **2.** 15 **3.** 20 **4.** 6 **5.** 16 **6.** 9
7. false **8.** true **9.** true **10.** true **11.** false
12. false **13.** $m\angle PMO = 55; m\angle PMQ = 125; m\angle QMN = 55$ **14.** $m\angle BOD = m\angle COE = 90; m\angle BOC = m\angle COD = 45; m\angle AOB = m\angle DOE = 45$
15. $m\angle BWC = m\angle CWD, m\angle AWB + m\angle BWC = 180; m\angle CWD + m\angle DWA = 180; m\angle AWB = m\angle AWD$

Practice 3-1

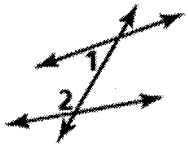
Classify each pair of angles as *alternate interior angles, same-side interior angles,* or *corresponding angles.*

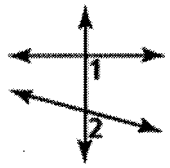
1. 

2. 

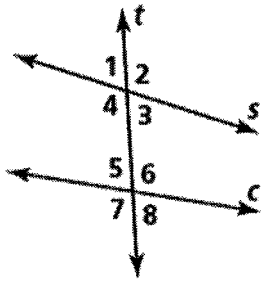
3. 

4. 

5. 

6. 

Use the figure on the right to answer Exercises 7–9.

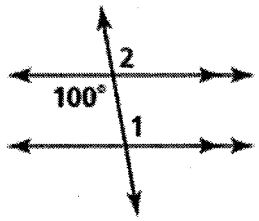


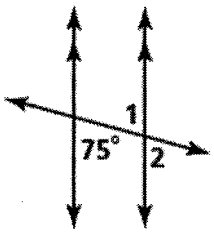
7. Name all pairs of corresponding angles formed by the transversal t and lines s and c.

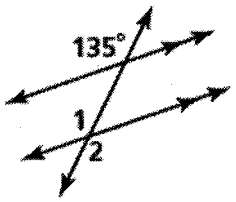
8. Name all pairs of alternate interior angles formed by the transversal t and lines s and c.

9. Name all pairs of same-side interior angles formed by the transversal t and lines s and c.

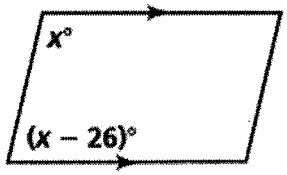
Find $m\angle 1$ and then $m\angle 2$. Justify each answer.

10. 

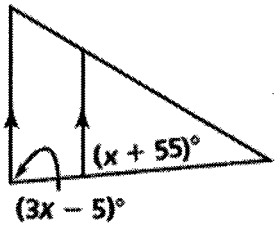
11. 

12. 

Algebra **Find the value of x. Then find the measure of each angle.**

13. 

14. 

15. 

Practice 3-1

1. corresponding angles **2.** alternate interior angles
3. same-side interior angles **4.** alternate interior angles
5. same-side interior angles **6.** corresponding angles
7. $\angle 1$ and $\angle 5$, $\angle 2$ and $\angle 6$, $\angle 3$ and $\angle 8$, $\angle 4$ and $\angle 7$
8. $\angle 4$ and $\angle 6$, $\angle 3$ and $\angle 5$ **9.** $\angle 4$ and $\angle 5$, $\angle 3$ and $\angle 6$
10. $m\angle 1 = 100$, alternate interior angles; $m\angle 2 = 100$, corresponding angles or vertical angles **11.** $m\angle 1 = 75$, alternate interior angles; $m\angle 2 = 75$, vertical angles or corresponding angles **12.** $m\angle 1 = 135$, corresponding angles; $m\angle 2 = 135$, vertical angles **13.** $x = 103$; 77°, 103° **14.** $x = 24$; 12°, 168° **15.** $x = 30$; 85°, 85°