

# 1 Chapter Test

# Chapter 1

# Chapter Test

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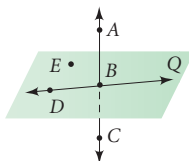
Describe each pattern and find the next two terms of each sequence. **1–3. See margin.**

1. 8, -4, 2, -1, ...      2. 0, 2, 4, 6, 8, ...



4. **Open-Ended** Write two different sequences whose first three terms are 1, 2, 4. Describe each pattern. **See margin.**
5. Draw a net for a cube. **See margin.**

Use the figure for Exercises 6–9.



6. Name three collinear points. **A, B, C**
7. Name four coplanar points. **Sample: A, B, C, D**
8. What is the intersection of  $\overleftrightarrow{AC}$  and plane  $Q$ ? **B**
9. How many planes contain each line and each point?  
 a.  $\overleftrightarrow{BD}$  and point **A**      b.  $\overleftrightarrow{AB}$  and point **C**  
 c.  $\overleftrightarrow{BE}$  and point **C**      d.  $\overleftrightarrow{BD}$  and point **E**      **9b. infinitely many**

10. **Track** The running track is a rectangle with a half circle on each end. If  $\overline{FI}$  and  $\overline{GH}$  are diameters, find the area inside the track to the nearest tenth. **29,054.0 ft<sup>2</sup>**

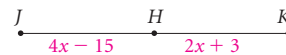


Complete with *always*, *sometimes*, or *never* to make each statement true.

11.  $\overleftrightarrow{LJ}$  and  $\overleftrightarrow{TJ}$  are ? opposite rays. **never**
12. Four points are ? coplanar. **sometimes**
13. Skew lines are ? coplanar. **never**
14. Two segments that lie in parallel lines are ? parallel. **always**
15. The intersection of two planes is ? a point. **never**

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16. **Algebra**  $JK = 48$ . Find the value of  $x$ . **10**



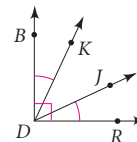
17. **Algebra**  $M(x, y)$  is the midpoint of  $\overline{CD}$  with endpoints  $C(5, 9)$  and  $D(17, 29)$ .  
 a. Find the values of  $x$  and  $y$ . **(11, 19)**  
 b. Show  $MC = MD$ .  **$MC = MD = \sqrt{136}$**

18. To the nearest tenth, find the perimeter of  $\triangle ABC$  with vertices  $A(-2, -2)$ ,  $B(0, 5)$ , and  $C(3, -1)$ . **19.1 units**

For the given dimensions, find the area of each figure to the nearest hundredth.

19. rectangle      20. square      21. circle  
 $b = 4$  m       $s = 3.5$  in.       $d = 9$  cm  
 $h = 2$  cm      **12.25 in.<sup>2</sup>**      **63.62 cm<sup>2</sup>**  
**800 cm<sup>2</sup> or 0.08 m<sup>2</sup>**

19. **Algebra** Use the figure for Exercises 22–24. In Exercises 22 and 23, find the value of each variable.



22.  $m\angle BDK = 3x + 4$ ,  $m\angle JDR = 5x - 10$       **7**
23.  $m\angle BDJ = 7y + 2$ ,  $m\angle JDR = 2y + 7$       **9**
24. Name two complementary angles. **Answers may vary. Sample:  $\angle BDJ$ ,  $\angle JDR$**

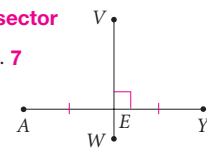
25. **Writing** Why is it useful to have more than one way of naming an angle? **See margin, p. 75.**

26. Draw an obtuse  $\angle ABC$ . Use a compass and straightedge to bisect the angle. **See margin, p. 75.**

Use the figure to complete Exercises 27–30.

27.  $\overline{VW}$  is the ? of  $\overline{AY}$ .  **$\perp$  bisector**
28. If  $EY = 3.5$ , then  $AY =$  ?. **7**
29.  $\frac{1}{2}$  ? =  $AE$        **$AY$**
30. ? is the midpoint of ?.  **$A$ ;  $AY$**

31. **Carpeting** How many square yards of carpet are needed to carpet a room that is 15 ft long and 20 ft wide?  **$33\frac{1}{3}$  yd<sup>2</sup>**



**Adapted Chapter Test** **L2**

**Chapter Test** **L3**

**Chapter Test**

Describe each pattern, and find the next two terms or drawings in each sequence.

1. 12, 17, 22, ...      2.  $-\frac{1}{2}, \frac{1}{4}, -\frac{1}{8}, \dots$       3. 7, 11, 16, 22, ...

4.

5. **Critical Thinking** Make a conjecture about the relationship between three consecutive whole numbers based on this relationship illustrated by the numbers 4, 4, and 5:  $(4 \times 5) - 4^2 = 1$ . Can you find a counterexample?

Use the figure to answer Exercises 6–9.

6. Name three collinear points.

7. Name four coplanar points.

8. Name four noncoplanar points.

9. Find each intersection.  
 a.  $\overleftrightarrow{EF}$  and plane  $P$   
 b.  $\overleftrightarrow{EF}$  and plane  $Q$   
 c.  $\overleftrightarrow{EF}$  and  $\overleftrightarrow{GH}$   
 d. plane  $P$  and point  $G$

Use the figure to answer Exercises 10–13.

10. Name a line parallel to  $\overleftrightarrow{BC}$ .

11. Name two lines skew to  $\overleftrightarrow{EF}$ .

12. Name a pair of parallel planes.

13. Name two intersecting planes.

14. Algebra  $MP = 62$ . Use the figure to find each of the following.  
 a.  $AM$   
 b.  $MP$   
 c.  $AP$

15. **Error Analysis** Show that the conjecture below is false by finding a counterexample. If two lines do not intersect, then they are not coplanar lines.

### Chapter Test

1. Div. each preceding term by  $-2$ ;  $\frac{1}{2}$ ,  $-\frac{1}{4}$
2. Add 2 to the preceding term; 10, 12

3. Rotate the U clockwise one-quarter turn. Alphabet is backwards;
4. Answers may vary. Sample:

- 1, 2, 4, 8, 16, 32, ...  
 1, 2, 4, 7, 11, 16, ...  
 In the first seq. double each term. In the second seq., add consecutive counting numbers.

