

Holt McDougal Florida Larson Geometry

**Practice Workbook
Teacher's Guide**



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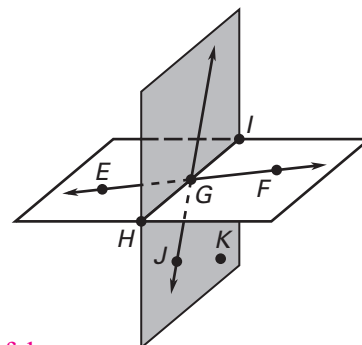
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LESSON
1.1

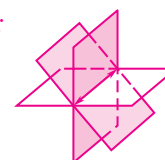
Practice
For use with pages 2–8

Use the diagram to decide whether the given statement is **true** or **false**.

1. Points $H, I,$ and G are collinear. **true**
2. Points $H, I,$ and J are coplanar. **true**
3. \overrightarrow{EG} and \overrightarrow{FG} are opposite rays. **false**
4. All points on \overrightarrow{GI} and \overrightarrow{GF} are coplanar. **true**
5. The intersection of \overrightarrow{EF} and plane JKH is \overrightarrow{HI} . **false**
6. The intersection of $\overrightarrow{EF}, \overrightarrow{HI},$ and \overrightarrow{JG} is point G . **true**
7. The intersection of plane EGH and plane JGI is point G . **false**
8. The intersection of plane EFI and plane JKG is \overrightarrow{HG} . **true**



10. *Sample answer:*



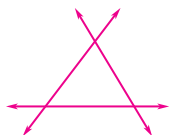
Sketch the figure described.

9. Two rays that do not intersect
10. Three planes that intersect in one line

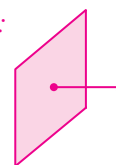
Sample answer:

11. Three lines that intersect in three points
12. A ray that intersects a plane in one point

Sample answer:

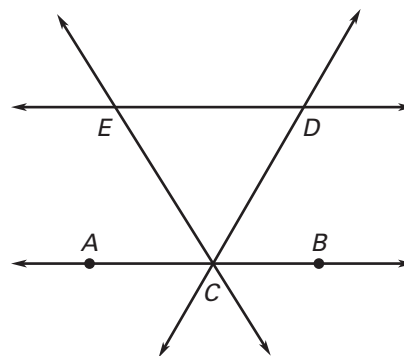


Sample answer:

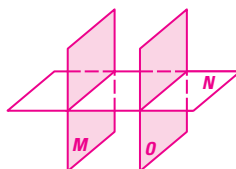


In Exercises 13–15, use the diagram.

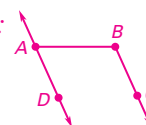
13. Name 12 different rays.
14. Name a pair of opposite rays.
15. Name 3 lines that intersect at point C .
13. $\overrightarrow{AB}, \overrightarrow{BA}, \overrightarrow{AC}, \overrightarrow{CA}, \overrightarrow{BC}, \overrightarrow{CB}, \overrightarrow{CD}, \overrightarrow{DC}, \overrightarrow{EC}, \overrightarrow{CE}, \overrightarrow{ED}, \overrightarrow{DE}$
14. $\overrightarrow{CA}, \overrightarrow{CB}$
15. $\overrightarrow{EC}, \overrightarrow{CD}, \overrightarrow{AB}$



16. Sketch four noncollinear points $A, B, C,$ and D . Then sketch $\overrightarrow{AB}, \overrightarrow{BC},$ and \overrightarrow{AD} . *See below.*
17. Sketch plane M intersecting plane N . Then sketch plane O so that it intersects plane N , but not plane M .



16. *Sample answer:*



LESSON
1.1

Practice *continued*

For use with pages 2–8

You are given an equation of a line and a point. Use substitution to determine whether the point is on the line.

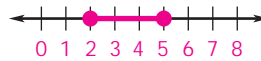
18. $y = 5x + 3$; $A(1, 8)$ **yes** 19. $y = -x + 3$; $A(6, 3)$ **no** 20. $y = -3x - 6$; $A(2, 0)$ **no**
 21. $2x - y = 7$; $A(3, -1)$ **yes** 22. $x + 6y = 40$; $A(-10, 5)$ **no** 23. $-x - 4y = -14$; $A(-6, 2)$ **no**

Graph the inequality on a number line. Tell whether the graph is a segment, a ray or rays, a point, or a line.

24. $x \geq 2$ **ray**



25. $2 \leq x \leq 5$ **segment**



26. $x \leq 0$ or $x \geq 8$ **rays**



27. $|x| \leq 0$ **point**

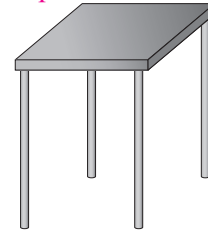


28. **Counter Stools** Two different types of stools are shown below.

- a. One stool rocks slightly from side to side on your kitchen floor. Which of the two stools could this possibly be? *Explain* why this might occur.
- b. Suppose that each stool is placed on a flat surface that is slightly sloped. Do you expect either of the stools to rock from side to side? *Explain* why or why not.



Three-legged stool



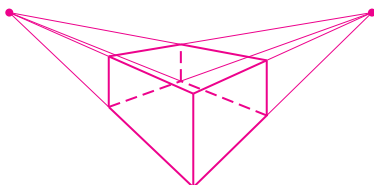
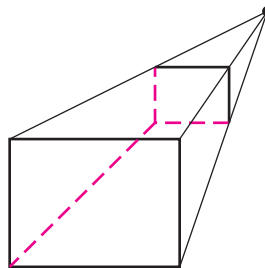
Four-legged stool

28. a. four-legged stool; Possible explanation: The tips of the 4 legs are not coplanar.

Possible explanation: The three-legged stool will not rock because the tips of its legs will always be coplanar. The four-legged stool may rock if the tips of its legs are not coplanar.

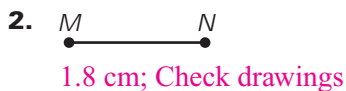
29. **Perspective Drawings** Recall from the text, that a perspective drawing is drawn using vanishing points. **Yes, it has one vanishing point.**

- a. Does the drawing at the right represent a perspective drawing? *Explain* why or why not.
- b. Using heavy dashed lines, draw the hidden lines of the prism.
- c. Redraw the prism so that it uses two vanishing points.



LESSON 1.2 Practice
For use with pages 9–14

Use a ruler to measure the length of the segment to the nearest tenth of a centimeter. Then draw a segment with the same length.

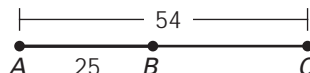


Use the Segment Addition Postulate to find the indicated length.

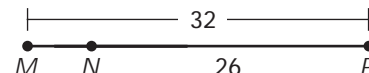
4. Find RT . **25.5**



5. Find BC . **29**



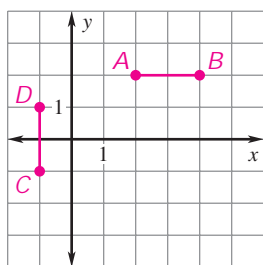
6. Find MN . **6**



Plot the given points in a coordinate plane. Then determine whether the line segments named are congruent.

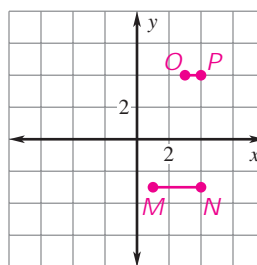
7. $A(2, 2), B(4, 2), C(-1, -1), D(-1, 1)$;

\overline{AB} and \overline{CD} **congruent**



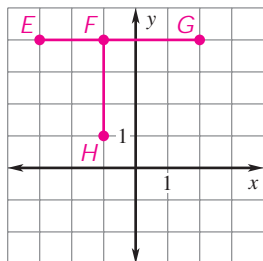
8. $M(1, -3), N(4, -3), O(3, 4), P(4, 4)$;

\overline{MN} and \overline{OP} **not congruent**



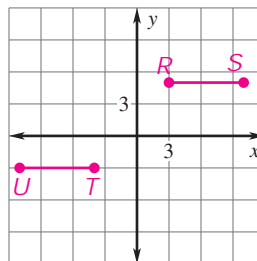
9. $E(-3, 4), F(-1, 4), G(2, 4), H(-1, 1)$;

\overline{EG} and \overline{FH} **not congruent**

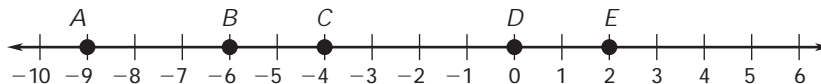


10. $R(3, 5), S(10, 5), T(-4, -3), U(-11, -3)$;

\overline{RS} and \overline{TU} **congruent**



Use the number line to find the indicated distance.



11. AB **3**

12. AD **9**

13. CD **4**

14. BD **6**

15. CE **6**

16. AE **11**

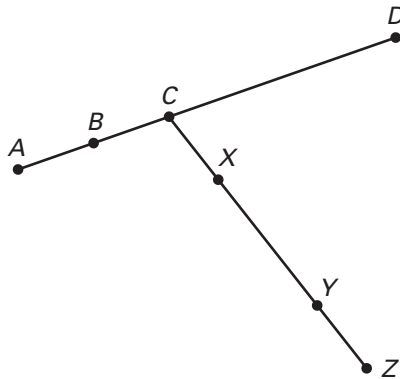
17. BE **8**

18. DE **2**

LESSON 1.2 Practice *continued*
For use with pages 9–14

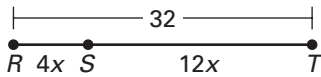
In the diagram, points $A, B, C,$ and D are collinear, points $C, X, Y,$ and Z are collinear, $AB = BC = CX = YZ, AD = 54, XY = 22,$ and $XZ = 33.$ Find the indicated length.

- 19. AB 11
- 20. BD 43
- 21. CY 33
- 22. CD 32
- 23. XC 11
- 24. CZ 44

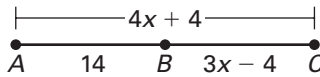


Find the indicated length.

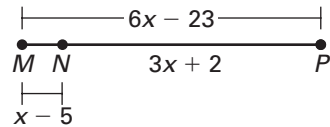
25. Find ST . 24



26. Find AC . 28



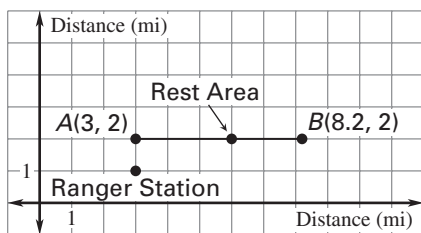
27. Find NP . 32



Point J is between H and K on \overline{HK} . Use the given information to write an equation in terms of x . Solve the equation. Then find HJ and JK .

- 28. $HJ = 2x$ $2x + 3x = 25; HJ = 10; JK = 15$
 $JK = 3x$
 $KH = 25$
- 29. $HJ = \frac{x}{4}$ $\frac{x}{4} + 3x - 4 = 22; HJ = 2; JK = 20$
 $JK = 3x - 4$
 $KH = 22$
- 30. $HJ = 5x - 4$ $5x - 4 + 8x - 10 = 38;$
 $JK = 8x - 10$ $HJ = 16; JK = 22$
 $KH = 38$
- 31. $HJ = 5x - 3$ $5x - 3 + x - 9 = 5x;$
 $JK = x - 9$ $HJ = 57; JK = 3$
 $KH = 5x$

32. **Hiking** On the map, \overline{AB} represents a trail that you are hiking. You start from the beginning of the trail and hike for 90 minutes at a rate of 1.4 miles per hour. How much farther do you need to hike to reach the end of the trail? 3.1 mi

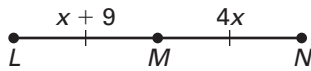


LESSON 1.3 Practice
For use with pages 15–22

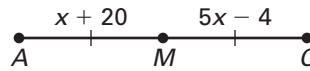
- Line RS bisects \overline{PQ} at point R . Find RQ if $PQ = 14$ centimeters. **7 cm**
- Line JK bisects \overline{MN} at point J . Find MN if $JM = 6\frac{3}{4}$ feet. **13.5 ft**
- Point T bisects \overline{UV} . Find UV if $UT = 4\frac{1}{2}$ yards. **9 yd**
- Point C bisects \overline{AB} . Find CB if $AB = 14.8$ meters. **7.4 m**

In the diagram, M is the midpoint of the segment. Find the indicated length.

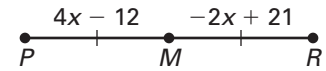
5. Find LN . **24**



6. Find AM . **26**



7. Find MR . **10**



Find the coordinates of the midpoint of the segment with the given endpoints.

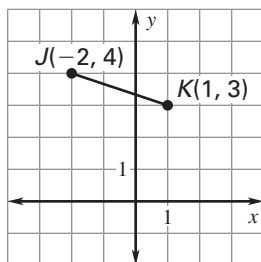
- $S(4, -1)$ and $T(6, 0)$ **$(5, -\frac{1}{2})$**
- $L(4, 2)$ and $P(0, 2)$ **$(2, 2)$**
- $H(-5, 5)$ and $I(7, 3)$ **$(1, 4)$**
- $G(-2, -8)$ and $H(-3, -12)$ **$(-2\frac{1}{2}, -10)$**

Use the given endpoint R and midpoint M of \overline{RS} to find the coordinates of the other endpoint S .

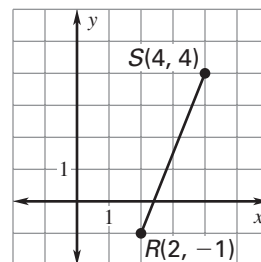
- $R(6, 0)$, $M(0, 2)$ **$(-6, 4)$**
- $R(3, 4)$, $M(3, -2)$ **$(3, -8)$**
- $R(-3, -2)$, $M(-1, -8)$ **$(1, -14)$**
- $R(11, -5)$, $M(-4, -4)$ **$(-19, -3)$**

Find the length of the segment. Round to the nearest tenth of a unit. Use the diagram to check that your answer is reasonable.

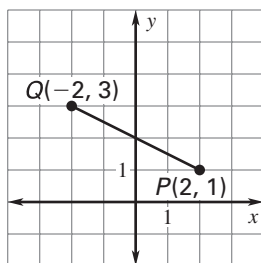
16. **3.2**



17. **5.4**



18. **4.5**



19. **11.3**

