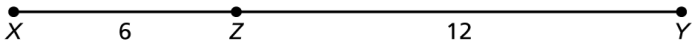
Name _____ Date _____

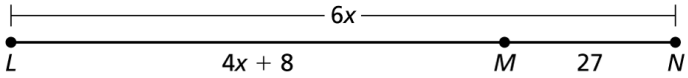
Chapter 1 Test A

1. Find the length of $\overline{XY}$. Explain how you found your answer.

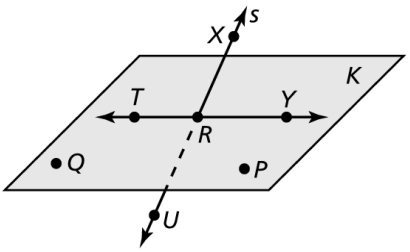


2. A map shows a section of Highway 18 that forms a straight line. A family plans to drive 440 miles on Highway 18 from Springfield to Columbia. They drive for 66 miles, and then decide they will stop halfway through their trip to rest for the night. How much farther do they need to drive before they stop for the night?

3. Point M is between points L and N on $\overline{LN}$. $LN = 6x$, $LM = 4x + 8$, and $MN = 27$. Use the information to solve for x, and then find LN.



Use the diagram.



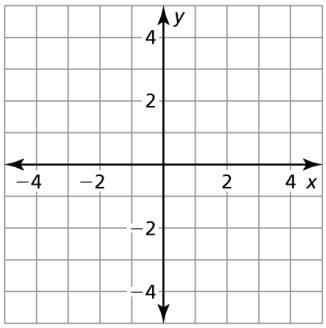
4. Give another name for line S.

5. Name three points that are coplanar.

6. Name three points that are collinear.

7. Give another name for plane K.

8. Plot the points in a coordinate plane. Then determine whether $\overline{AB}$ and $\overline{CD}$ are congruent: $A(-2, 1)$, $B(2, 1)$, $C(3, 2)$, $D(3, -2)$.



9. The endpoints of $\overline{CD}$ are $C(1, -6)$ and $D(7, 5)$. Find the coordinates of the midpoint M.

10. The midpoint of $\overline{RS}$ is $M(1, 2)$. One endpoint is $R(-6, 6)$. Find the coordinates of endpoint S.

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. See left.

9. _____

10. _____

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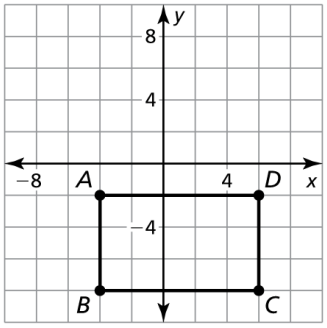
Chapter 1 Test A (continued)

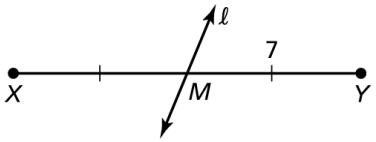
Find the perimeter and area of the figure shown.

11.

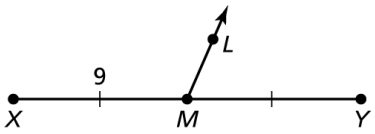


Identify the segment bisector of $\overline{XY}$. Then find XY.

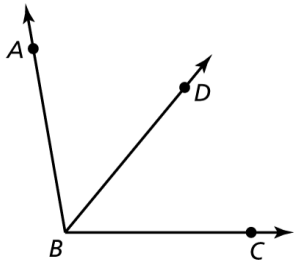
12.



13.



$\overrightarrow{BD}$ bisects $\angle ABC$. Use the diagram and the given angle measure to find the indicated angle measures.



14. $m\angle ABD = 57°$. Find $m\angle DBC$ and $m\angle ABC$.

15. $m\angle ABD = 70°$. Find $m\angle DBC$ and $m\angle ABC$.

16. $m\angle ABC = 110°$. Find $m\angle ABD$ and $m\angle DBC$.

Find the angle measure.

17. $\angle B$ is a supplement of $\angle A$ and $m\angle A = 65.2°$. Find $m\angle B$.

18. $\angle B$ is a complement of $\angle A$ and $m\angle A = 65.2°$. Find $m\angle B$.

19. $\angle A$ is a supplement of $\angle B$ and $m\angle B = (3x - 2)°$. Find $m\angle A$.

20. $\angle A$ is a complement of $\angle B$ and $m\angle B = (3x - 2)°$. Find $m\angle A$.

Answers

11. _____

_____

12. _____

_____

13. _____

_____

14. _____

_____

15. _____

_____

16. _____

_____

17. _____

18. _____

19. _____

20. _____

1. 18 units; $XY = XZ + ZY$, because point Z is on $\overline{XY}$.

2. 154 mi

3. $x = 17.5$; $LN = 105$

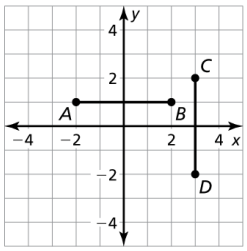
4. *Sample answer:* $\overrightarrow{XR}$

5. *Sample answer:* points T, Q, and P

6. *Sample answer:* points T, R, and Y

7. *Sample answer:* plane TRP

8.



$\overline{AB} \approx \overline{CD}$

9. $\left(4, -\frac{1}{2}\right)$

10. $(8, -2)$

11. perimeter $= 32$ units, area $= 60$ square units

12. line ℓ; $XY = 14$ units

13. $\overrightarrow{ML}$; $XY = 18$ units

14. $m\angle DBC = 57°$, $m\angle ABC = 114°$

15. $m\angle DBC = 70°$, $m\angle ABC = 140°$

16. $m\angle ABD = 50°$, $m\angle DBC = 50°$

17. 114.8°

18. 24.8°

19. $(182 - 3x)°$

20. $(92 - 3x)°$