Chapter 4 Cumulative Test Review

Indicate the answer choice that best completes the statement or answers the question.

1. Two angles are supplementary. One angle measures 46° more than the other. **Find the measure of the two angles.**

   A. 32, 148   B. 74, 106

   C. 67, 113   D. 76, 104

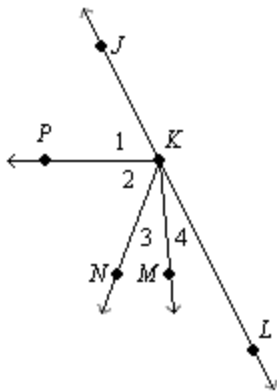   *Find the coordinates of the midpoint of a segment having the given endpoints.*
2. $Q(8, 11), R(-9, -8)$

   F. $(9.5, -8.5)$ G. $(8.5, 9.5)$

   H. $(-0.5, 1.5)$ I. $(17, 19)$

3. **$Q(5.3, 9.2), R(1.8, 7.6)$**

   A. $(3.55, 8.4)$ B. $(7.25, 4.7)$
   C. $(3.5, 1.6)$ D. $(1.75, 0.8)$

   In the figure, $\overrightarrow{KJ}$ and $\overrightarrow{KL}$ are opposite rays. $\angle 1 \cong \angle 2$ and $\overrightarrow{KM}$ bisects $\angle NKL$.
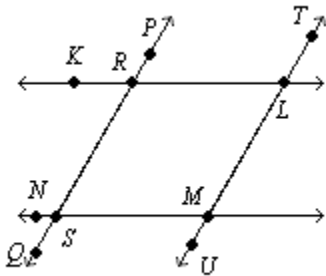

4. Using the figure above, if $\angle JKN$ is a right angle and the measure of angle 4 = $5(2x - 3)$ what is x?

   F. 5   G. 6
   H. 3   I. 45

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5. In the figure, the measure of angle NML=100, $\overleftrightarrow{PQ} \parallel \overleftrightarrow{TU}$ and $\overleftrightarrow{KL} \parallel \overleftrightarrow{NM}$. Find the measure of angle *QSN*.

A. 120   B. 80
C. 40   D. 100

Determine whether $\overleftrightarrow{WX}$ and $\overleftrightarrow{YZ}$ are parallel, perpendicular, or neither.

6.   **W(–4, 5), X(6, 1)**   **Y(–1, 6), Z(5, 3)**
  F. parallel
  G. neither
  H. perpendicular

Determine the slope of the line that contains the given points.

7. **T(4, 4), V(8, 7)**
  A. $\frac{4}{3}$ B. $-\frac{4}{3}$
  C. –1   D. $\frac{3}{4}$

8. **Find the value of the variable and *LM*** if *M* is between *L* and *N*.
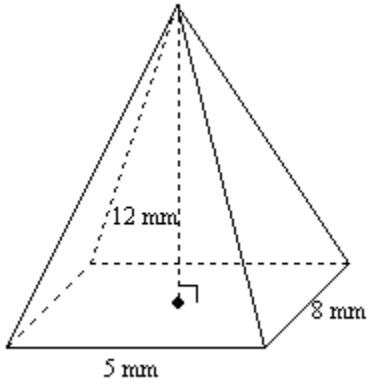   *HInt: draw segment LN and put M between L and N to "see" the equation.*

   LM = 8a, MN = 5a, LN = 65

   F. $a = 21.7, LM = 65$ G. $a = 7, LM = 72$
   H. $a = 5, LM = 25$ I. $a = 5, LM = 40$

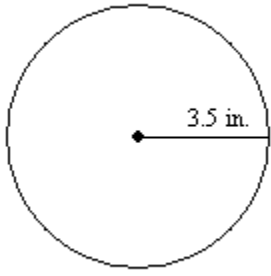## Chapter 4 Cumulative Test Review

Find the volume of the solid.

9.

A. 128 mm^3 B. 480 mm^3

C. 157.3 mm^3 D. 160 mm^3

Find the circumference of the figure.

10.
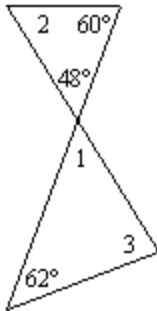

F. about 22 in.   G. about 11 in.

H. about 7 in.   I. about 38.5 in.

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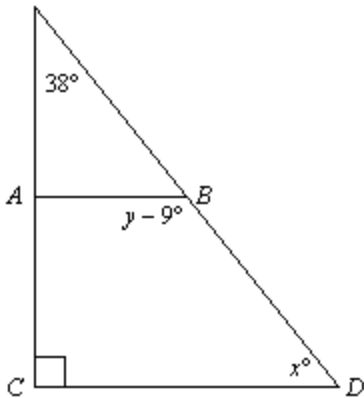*Find each measure.*

11. $m\angle 1$, $m\angle 2$, $m\angle 3$

    A. $m\angle 1 = 62$, $m\angle 2 = 48$, $m\angle 3 = 56$ B. $m\angle 1 = 62$, $m\angle 2 = 72$, $m\angle 3 = 56$

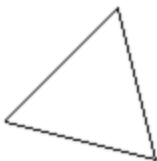   C. $m\angle 1 = 48$, $m\angle 2 = 72$, $m\angle 3 = 70$ D. $m\angle 1 = 48$, $m\angle 2 = 60$, $m\angle 3 = 62$

12. In the figure, $\overline{AB} \parallel \overline{CD}$. Find x and y.

    F. $x = 32$, $y = 137$ G. $x = 38$, $y = 151$

    H. $x = 52$, $y = 137$ I. $x = 137$, $y = 52$

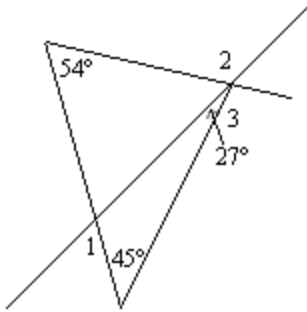*Classify the triangle as acute, equiangular, obtuse, or right.*

13.

    A. right   B. equiangular and obtuse

    C. equiangular and acute   D. obtuse

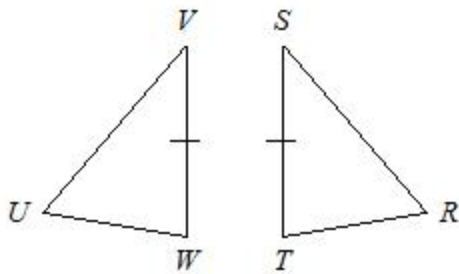## Chapter 4 Cumulative Test Review

Find each measure.

14. $m\angle 1$, $m\angle 2$, $m\angle 3$

    F. $m\angle 1 = 45$, $m\angle 2 = 126$, $m\angle 3 = 126$ G. $m\angle 1 = 72$, $m\angle 2 = 153$, $m\angle 3 = 72$

    H. $m\angle 1 = 72$, $m\angle 2 = 126$, $m\angle 3 = 99$ I. $m\angle 1 = 54$, $m\angle 2 = 99$, $m\angle 3 = 99$

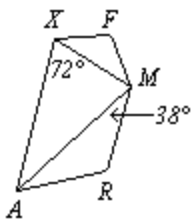*Identify the congruent triangles in the figure.*

15.

    A. $\triangle SRT \cong \triangle WUV$ B. $\triangle RST \cong \triangle WVU$

    C. $\triangle TRS \cong \triangle WUV$ D. $\triangle STR \cong \triangle WVU$

Write an equation in point-slope form of the line having the given slope that contains the given point.

16. $m = 5$, $\left(4, 3\right)$

    F. $y = 5x - 1$ G. $y - 5 = 3(x - 4)$

    H. $y - 4 = 5(x - 3)$ I. $y - 3 = 5(x - 4)$

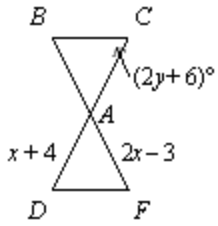*Refer to the figure. $\triangle ARM$, $\triangle MAX$, and $\triangle XFM$ are **all isosceles triangles.***

17. What is $m\angle AMX$?

    A. 80   B. 38

    C. 64   D. 72

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18. Triangles *ABC* and *AFD* are vertical congruent equilateral triangles. Find *x* and *y*.

F. $x = 7, y = 27$ G. $x = \frac{7}{3}, y = 27$

H. $x = \frac{7}{3}, y = 28$ I. $x = 7, y = 33$

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Answer Key

1. C

2. H

3. A

4. G

5. B

6. G

7. D

8. I

9. D

10. F

11. C

12. H

13. C

14. H

15. C

16. I

17. D

18. F