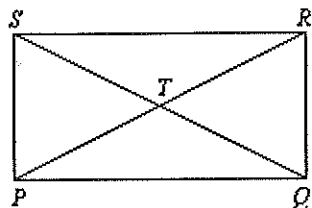


Chapter 4 Free Response Practice Test

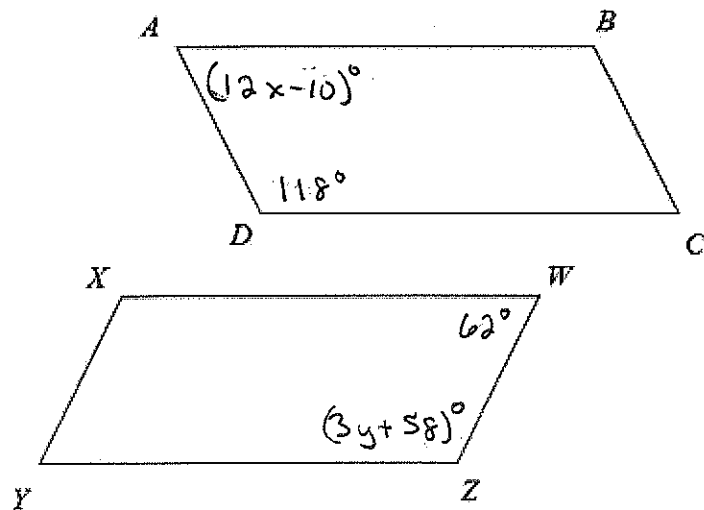
1. Samantha has cut a pastry into four parts. Suppose $\overline{SR} \parallel \overline{PQ}$ and T is the midpoint of \overline{SQ} . Determine whether $\triangle SRT \cong \triangle QTP$. Justify your answer.



2. Draw and label a figure to represent the congruent triangles described below. Then find x and y .

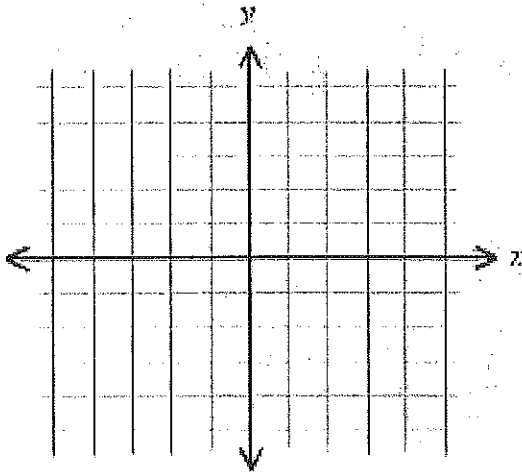
$$\triangle JKL \cong \triangle STU, m\angle S = 26^\circ, m\angle J = (2x + 4y)^\circ, m\angle L = 66^\circ, m\angle T = (2x + 12y)^\circ$$

3. Parallelogram $ABCD$ is congruent to parallelogram $WXYZ$. Solve for x and y .



Chapter 4 Free Response Test

4. John and Nyle are playing in the playground. They mark a point on the ground. John moves 2 feet west of the point and then moves 4 feet north. Nyle moves 4 feet east of the point and then moves 3 feet to the north. Find the distance between John and Nyle.



5. If $\triangle LMN \cong \triangle RST$, $LM = 74^\circ$, $RS = (6x + 44)^\circ$, $MN = (8y - 16)^\circ$ and $ST = 32^\circ$, solve for x and y .

Chapter 4 Paper Review

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

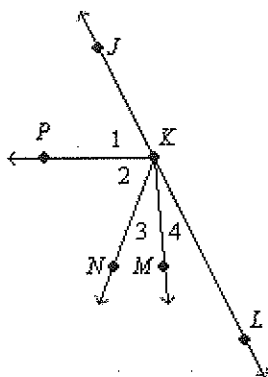
- Two angles are supplementary. One angle measures 23° more than the other. Find the measure of the two angles.

Find the coordinates of the midpoint of a segment having the given endpoints.

2. $Q(4, 9), R(-4, -3)$

3. $Q(2.6, 3.4), R(1.2, 5.4)$

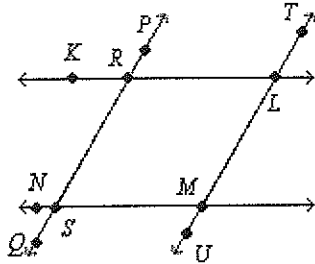
In the figure, \overrightarrow{KJ} and \overrightarrow{KL} are opposite rays. $\angle 1 \cong \angle 2$ and \overrightarrow{KM} bisects $\angle NKL$.



- Using the figure above, if $\angle JKN$ is a right angle and $m\angle 4 = 4x - 10^\circ$, what is x ?

Chapter 4 Cumulative Test Review

5. In the figure, the measure of angle $NML = 110^\circ$, $\overleftrightarrow{PQ} \parallel \overleftrightarrow{TU}$ and $\overleftrightarrow{KL} \parallel \overleftrightarrow{NM}$. Find the measure of angle QSN .



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

6. $w(-2, 3)$, $x(4, 1)$ $y(-1, 6)$, $z(0, 9)$

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

7. $T(2, -2)$, $V(7, 4)$

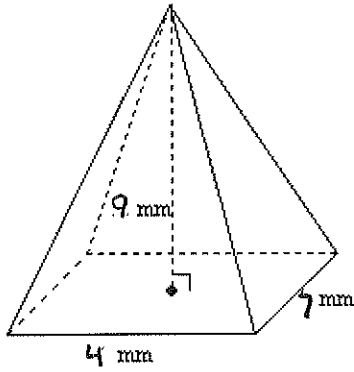
8. Find the value of the variable and LM if M is between L and N .
Hint: draw segment LN and put M between L and N to "see" the equation.

$LM = 7a$, $MN = 5a$, $LN = 84$

Chapter 4 Cumulative Test Review

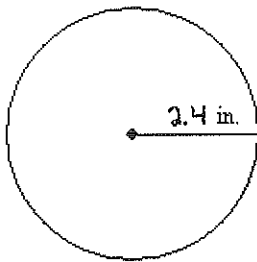
Find the volume of the solid.

9.



Find the circumference of the figure.

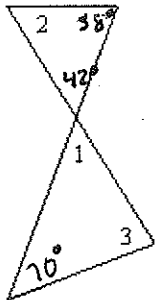
10.



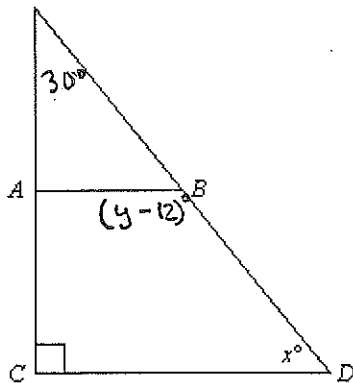
Chapter 4 Cumulative Test Review

Find each measure.

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

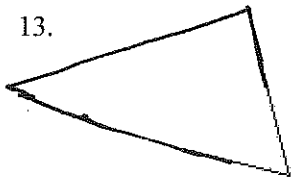


12. In the figure, $\overline{AB} \parallel \overline{CD}$. Find x and y .



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

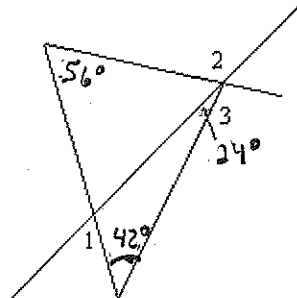
13.



Chapter 4 Cumulative Test Review

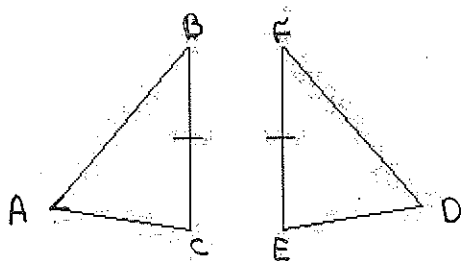
Find each measure.

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



Identify the congruent triangles in the figure.

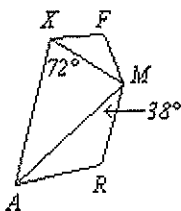
15.



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

16. $m = 3$, $(2, 1)$

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



17. What is $m\angle ARM$?

Chapter 4 Cumulative Test Review

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

