Geometry Name _____

2nd Semester Examination REVIEW!!!

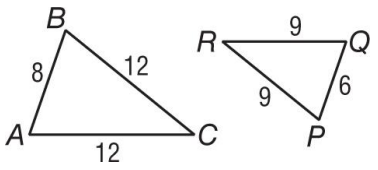
Instructions:
1. You must use a pencil.
2. You must show all work on the review to receive credit.
3. Circle your final answers.

Chapter 7

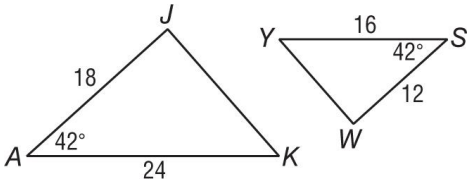
1. The ratio of the measures of three angles of a triangle are 5:7:8. Find the measure of each angle of the triangle. You must set up an equation!

For questions 2 and 3, determine if the triangles are similar. If they are, give the scale factor. If not, tell why not.

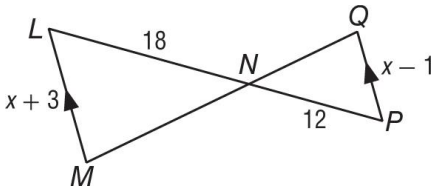
2.



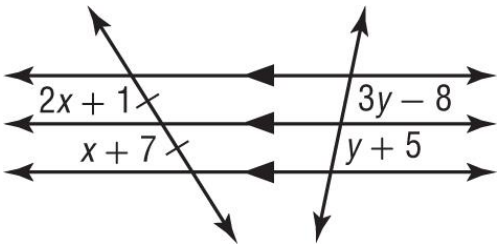
3.



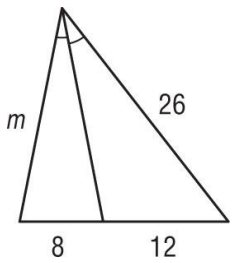
4. The two triangles are similar. Find LM and QP. You must have a proportion for each.



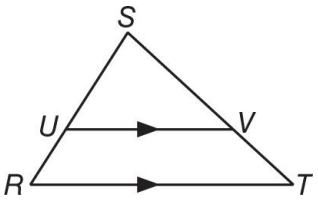
5. Find x and y. Show work!



6. Find the value of *m*.

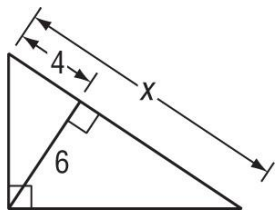


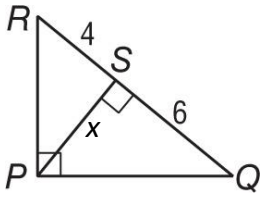
7. If *RU* = 8, *US* = 14, *TV* = *x* – 1, and *VS* = 17.5, find *x* and *TV*.

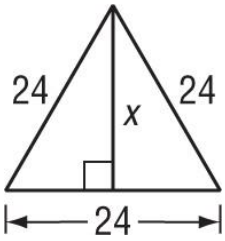


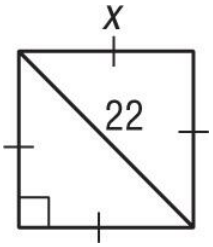
Chapter 8

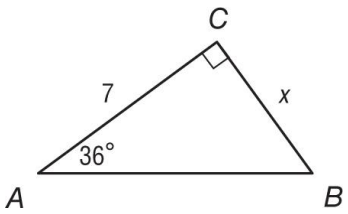
Find x. You must show all work. Give EXACT answers when you can. Round to one decimal place when necessary.

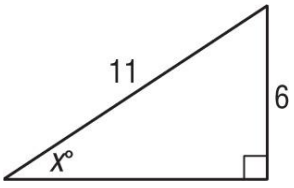
8. 

9. 

10. 

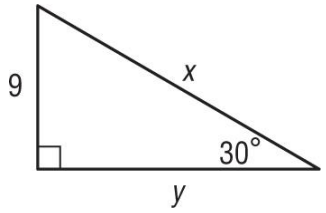
11. 

12. 

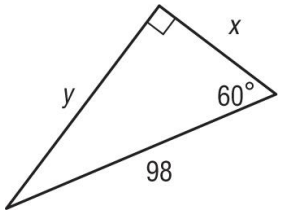
13. 

Find X and Y. You must give EXACT answers!

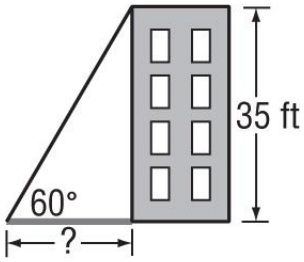
14.



15.



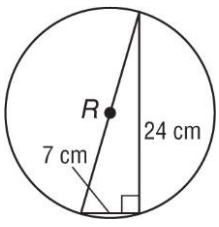
16. **SHADOWS** Suppose the sun casts a shadow off a 35-foot building. If the angle of elevation to the sun is 60°, how long is the shadow to the nearest tenth of a foot?



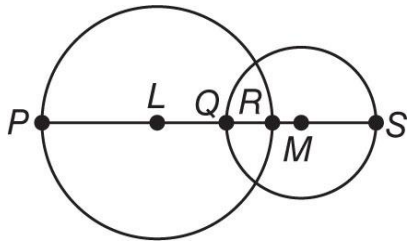
Chapter 10

17. Find the radius and diameter of a circle with a circumference of 48π inches.

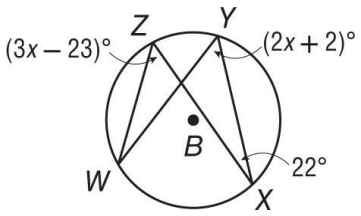
18. Find the exact circumference.



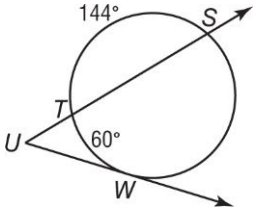
19. The diameters of $\odot L$ and $\odot M$ are 20 and 13 units, respectively, and $QR = 4$. Find LQ.



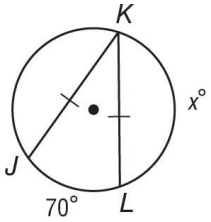
20. Find x



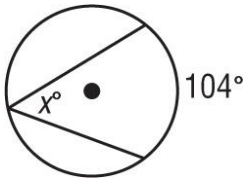
21. Find m$\angle$U



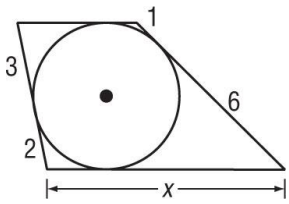
22. Find x



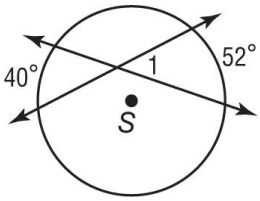
23. Find x



24. Find x.



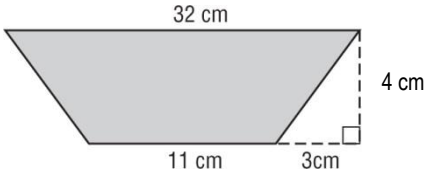
25. Find $m\angle 1$



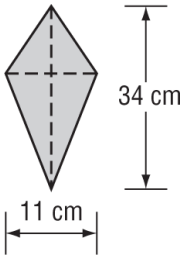
Chapter 11

Find the area of the shaded figures. Show all work and circle your final answer. Round to the nearest tenth when necessary. Don't forget units!

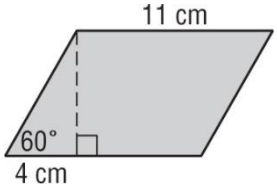
26.



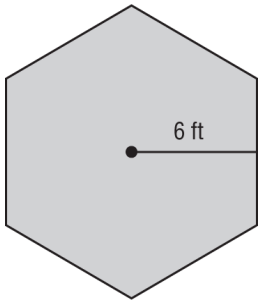
27.



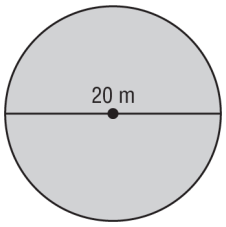
28.



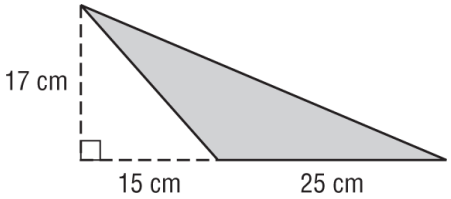
29.



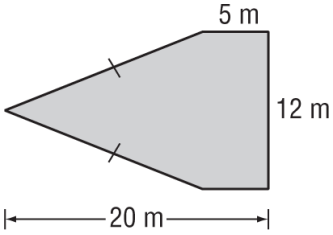
30.



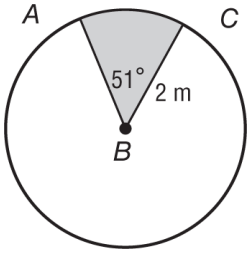
31.



32.



33. Find the area of the shaded sector



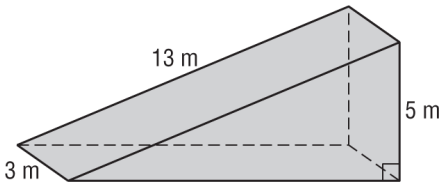
Chapter 12

FORMULAS

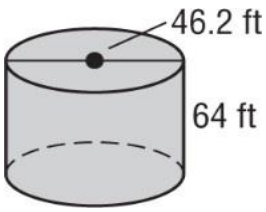
Prism:	$L = Ph$	$S = L + 2B$	$V = Bh$
Cylinder:	$L = 2\pi rh$	$S = L + 2B$	$V = \pi r^2 h$
Pyramid:	$L = \frac{1}{2}Pl$	$S = L + B$	$V = \frac{1}{3}Bh$
Cone:	$L = \pi rl$	$S = L + B$	$V = \frac{1}{3}\pi r^2 h$
Sphere:		$S = 4\pi r^2$	$V = \frac{4}{3}\pi r^3$

Find BOTH the Lateral Area and the Surface Area for the following figures. Make sure to show all work and included units in your answer. Round your final answer to the nearest tenth. Put your final answers on the lines provided.

34.



3 35. 34.

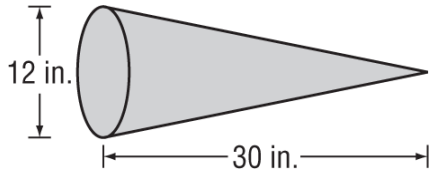


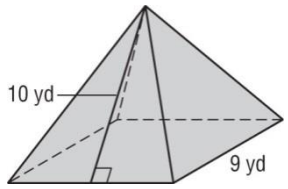
Lateral Area = _____

Surface Area = _____

Lateral Area = _____

Surface Area: = _____

36. 

37. 

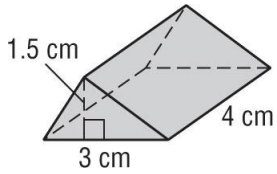
Lateral Area = _____

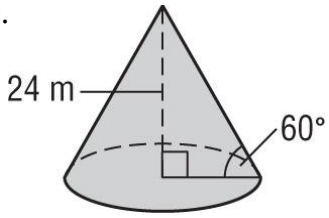
Surface Area = _____

Lateral Area = _____

Surface Area = _____

Find the Volume for the following figures. Make sure to show all work and included units in your answer. Round your final answer to the nearest tenth. Put your final answers on the lines provided.

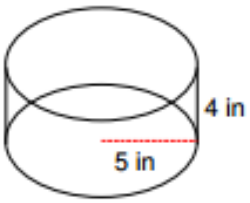
38. 

39. 

Volume = _____

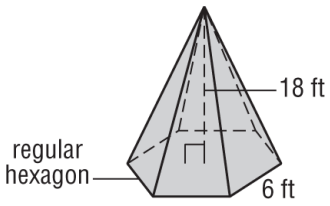
Volume = _____

40.



Volume = _____

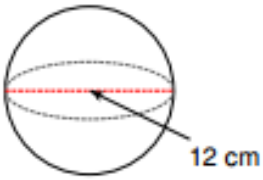
4 41.



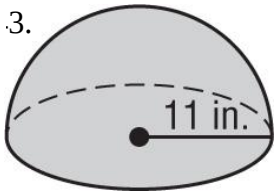
Volume = _____

Calculate both Surface Area and Volume for the figures below. Make sure to show all work and included units in your answer. Round your final answer to the nearest tenth. Put your final answers on the lines provided.

42.



43. 3.



Surface Area: _____

Volume: _____

Surface Area: _____

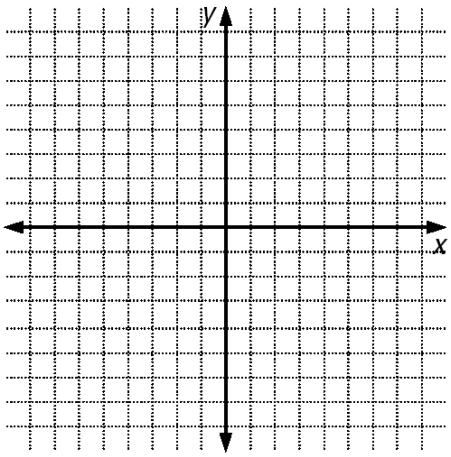
Volume: _____

Chapter 9

For all of the following problems, graph the original figure given the coordinates and then graph the figure that is the result of the given transformation. You must have BOTH figures on your graph for credit.

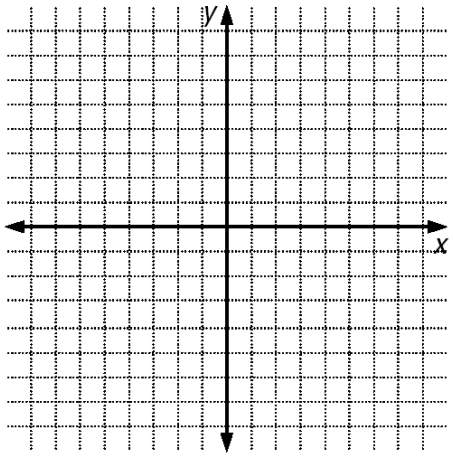
44. $T(3, 3)$, $U(6, -1)$, and $V(-2, 1)$.

Reflection over the line y = 2



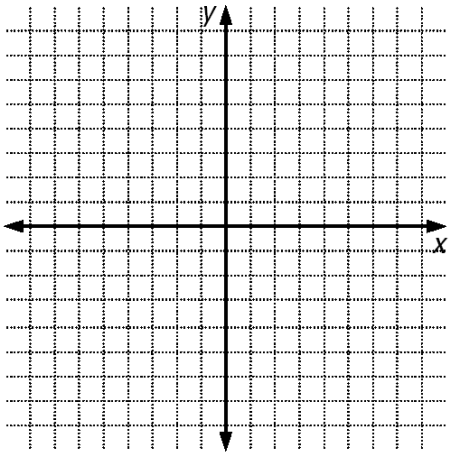
45. $P(3, 4)$, $Q(5, -1)$, and $R(-3, 0)$.

Reflection over the line y = x



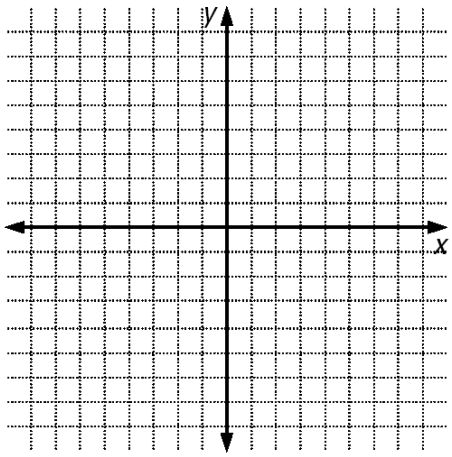
46. $A(3, 0)$, $B(6, -5)$, $C(0, -3)$, and $D(-1, -2)$

Translated along the vector $\langle 1, -2 \rangle$

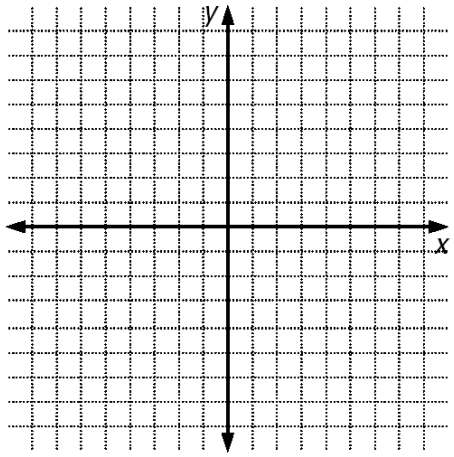


47. $O(4, 2)$, $P(5, 0)$, and $Q(1, -2)$

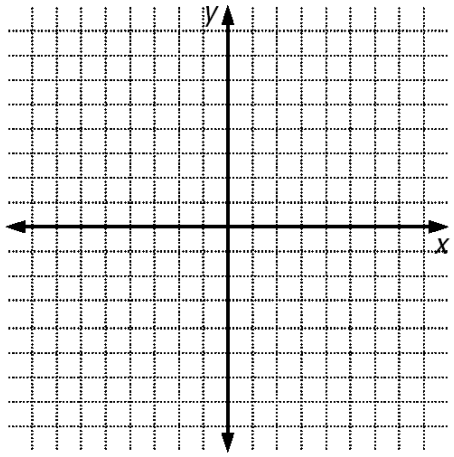
Rotated 90° about the origin



48. $L(3, 1)$, $M(-1, 6)$, and $N(-3, 2)$
Rotated 90° about the origin
AND reflected over the x-axis



49. $D(-2, 0)$, $G(0, 2)$, $F(2, -2)$
Dilated centered at the origin with
a scale factor of k = 1.5.



<u>Algebra Review</u>

Factor the following <u>completely</u>. You may do any work you need to below the problem. Put only the final answer on the line.

50. $x^2 + 4x - 21$ _____

51. $34x^3 + 4x^2$ _____

52. $16x^2 - 81$ _____

53. $4x^2 - 25x - 21$ _____

54. $8x^2 - 50$ _____

55. $2x^2 - 5x - 12$ _____

Solve the following Quadratic Equations by FACTORING.

56. $x^2 - 7x - 50 = -6$

57. $9x^2 - 25 = 0$

58. $6x^2 - 25x = 9$

59. $5x^2 - 20x + 6 = 6$

Solve the following systems of equations.

60. $y = -3x + 5$
$5x - 4y = -3$

61. $3x - 2y = 2$
$5x - 5y = 10$