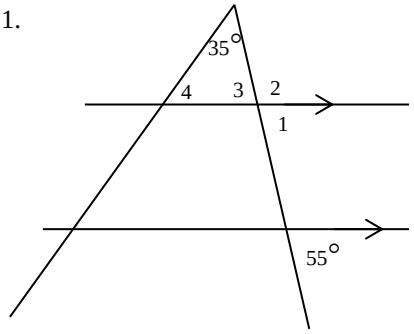
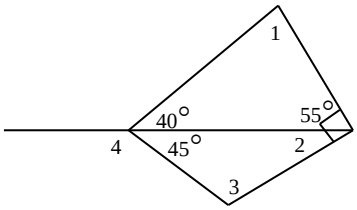
Math II Spring Semester Final Review

For problems 1-3, find each numbered angle and give a reason for each answer.

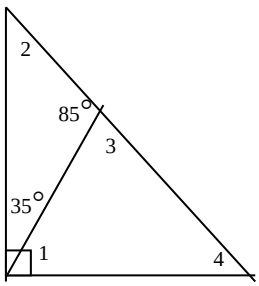
1.



2.

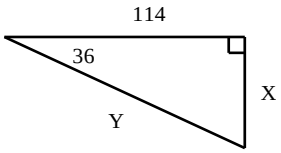


3.



4. A radio tower is 60 feet tall and makes a shadow 50 feet long. What is the measure of the angle of elevation??

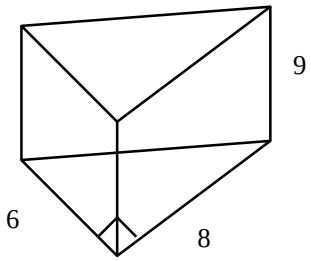
Use the figure below to answer questions 5 and 6



5. Find X

6. Find Y

Use this diagram for #7-8

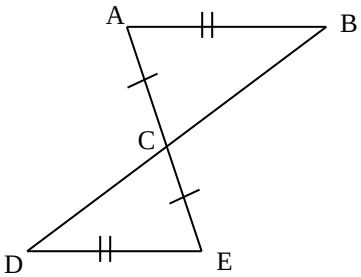


7. What is the volume area of the triangular based prism above?

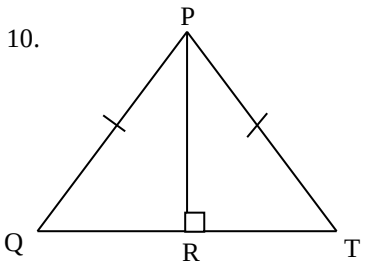
8. What is the surface area of the triangular based prism above?

For problems 9-19, if the two triangles shown are congruent, give a reason (SSS, SAS, ASA, AAS, or HL) why they are congruent and write a correct congruence statement. If there is not enough information to say the triangles are congruent, write "not congruent".

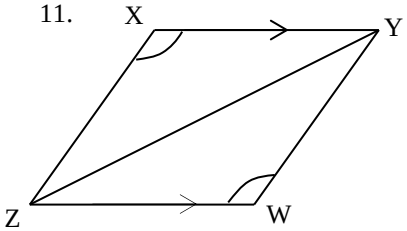
9.



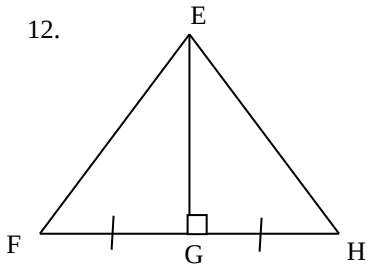
10.



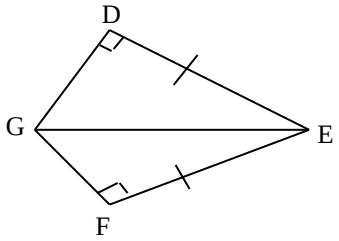
11.



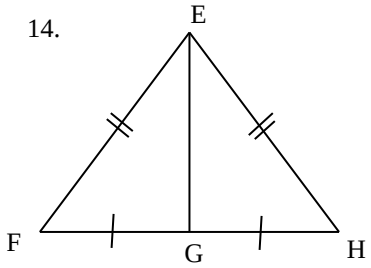
12.



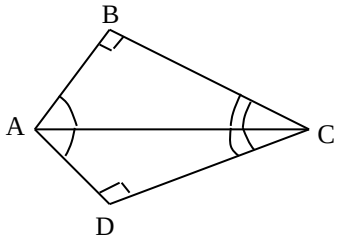
13.



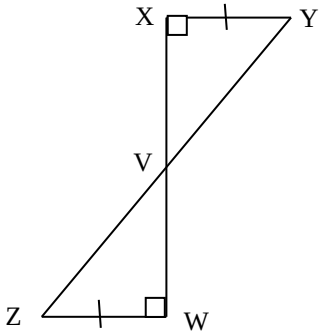
14.



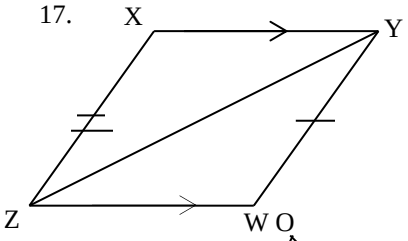
15.

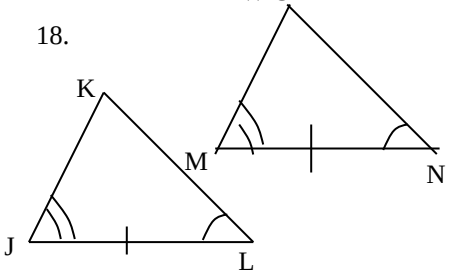


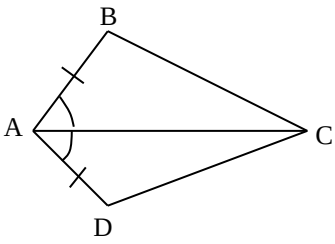
16.



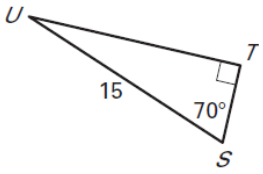
C

17. 

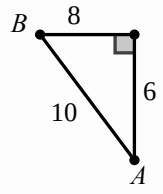
18. 

19. 

20. Solve for all missing sides and angles.



21. Find each:

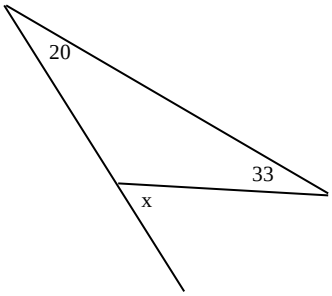


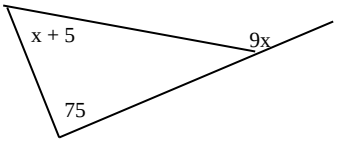
a) Sin A b) Cos A

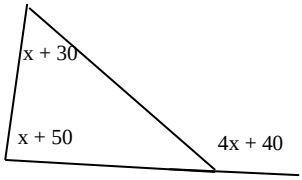
c) Tan B d) Sin B

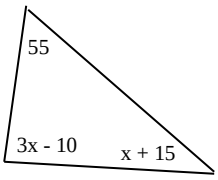
22. You are standing 350 feet away from a skyscraper that is 750 feet tall. What is the angle of elevation from you to the top of the building?

For problems, find x in each figure.

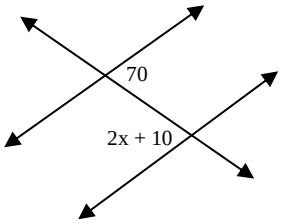
23. 

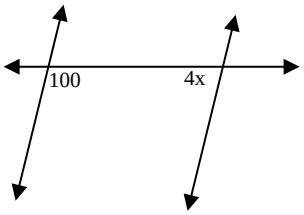
24. 

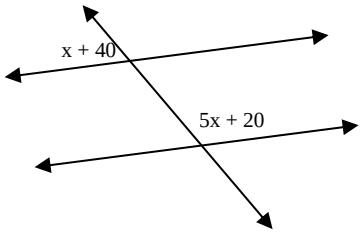
25. 

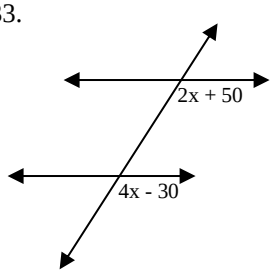
28. 

29. Write an equation of a circle with center (-3, 8) and radius of 7.

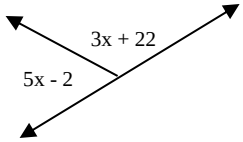
30. 

31. 

32. 

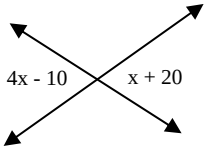
33. 

For problems 34-38, find x.

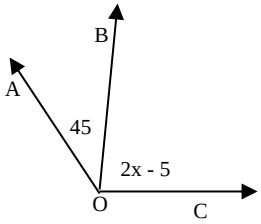
34. 

35. ∠1 and ∠2 are complementary.
m∠1 = 3x + 10 m∠2 = 2x

Find x.

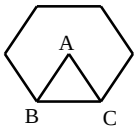
36. 

37. m∠ AOC = 130°



38. $\angle 1$ and $\angle 2$ are supplementary
$m\angle 1 = 3x$
$m\angle 2 = x + 20$
Find x.

39. In the figure below, A is the center of the hexagon and the radius is 5 inches. Find the area of the hexagon.



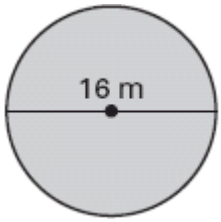
40. Given a regular octagon with sides of length 8. Find the area.

41. Which of the following is a property of a rhombus:

A. The diagonals are congruent
B. The diagonals are perpendicular
C. All of the angles are 90º
D. It has 5 sides

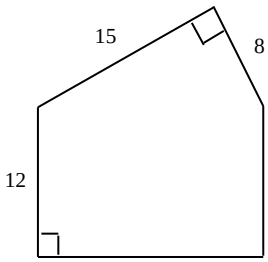
42. List the properties of a rectangle.

43. Find circumference and area:

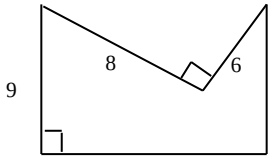


For problems 46-48, find the area and perimeter of each figure.

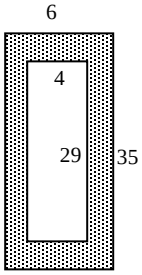
44.



45.

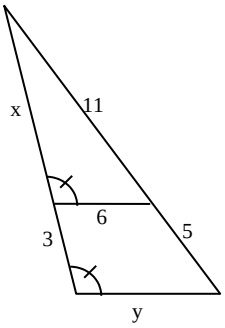


46. Find the area of the shaded region.

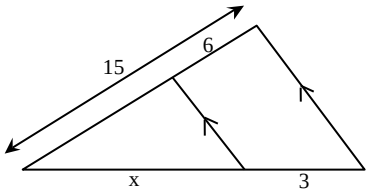


For problems 47-49, use similar triangles to find x and in each diagram.

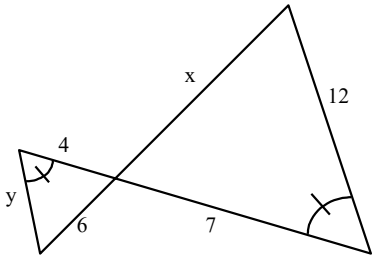
47.



48.

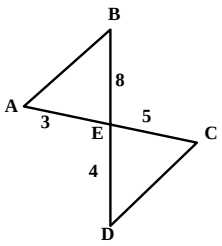


49.

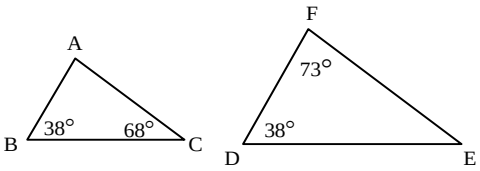


For problems 50-51, are the triangles similar? If so, by which postulate?

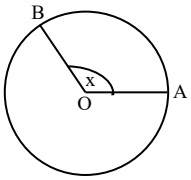
50.



51.

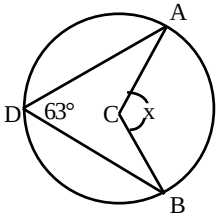


Use this diagram for 52-53.



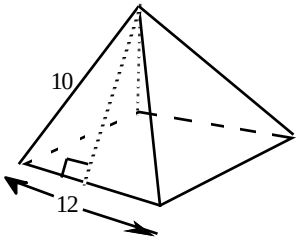
52. Find the area of the sector if OA = 4 and x = 150°.

53. Find the length of arc AB if OA = 5 and x = 140°.

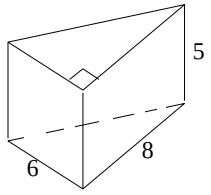


x = _____

54. Find the surface area:



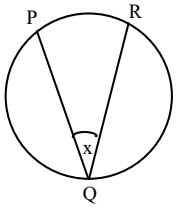
55. Find the surface area (SA) and volume (V) of the prism.



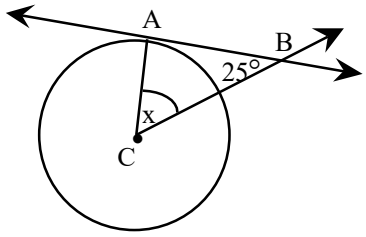
SA = _____

V = _____

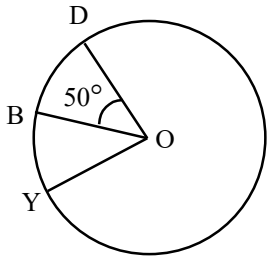
56. Find x if the measure of $\overset{\frown}{PR}$ 58°.



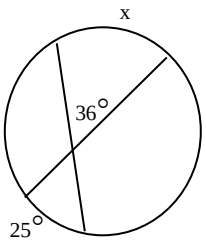
57. Find x.



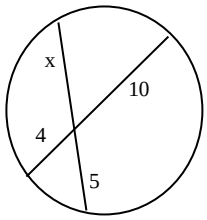
58. Find the measure of $\overset{\frown}{BYD}$ O is the center.



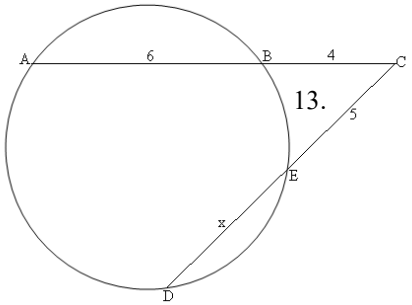
59. Find x in each figure where x in an angle:



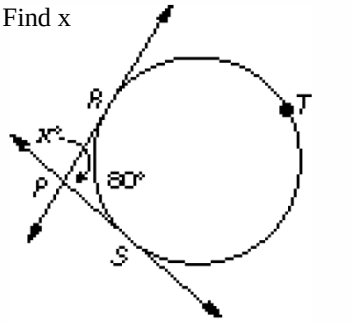
60. Find x in each figure where x is the length of a segment



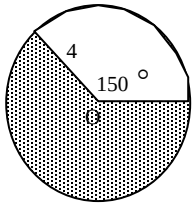
61. Find x



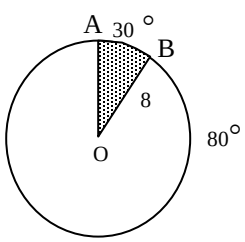
62. Find x



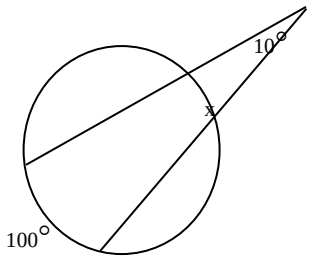
63. Find the shaded area in the circle with center O, a central angle of 150°, and a radius of 4.



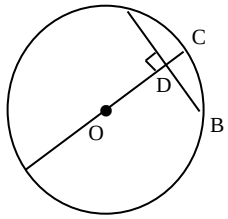
64. Find the length of arc AB if m∠AOB = 30° and the radius = 8.



65. Find x

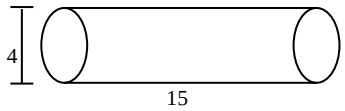


66. AB = 16, Radius = 10, find OD

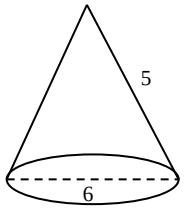


Find the Volume and Surface Area for #67-70.

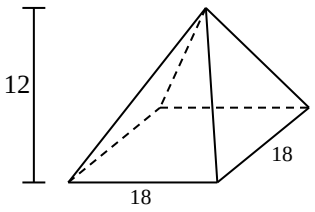
67.



68.



69.



70. If the distance from a helicopter to a tower is 300 feet and the angle of depression from the helicopter to the tower is 42°, find the distance on the ground from a point directly below the helicopter to the tower.