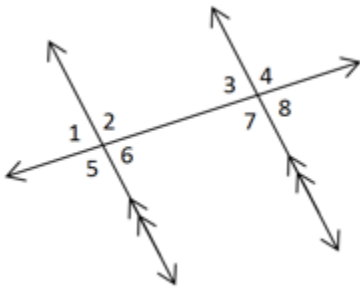


## Math 2: Final Review

Complete each statement:

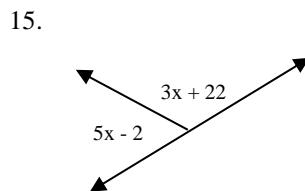
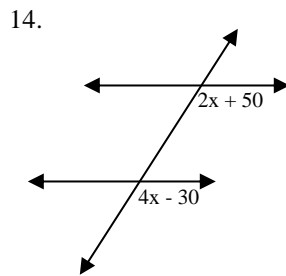
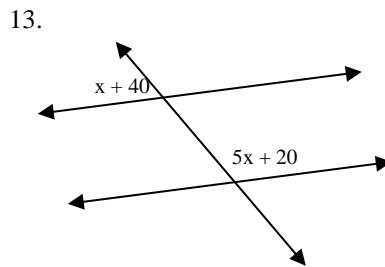
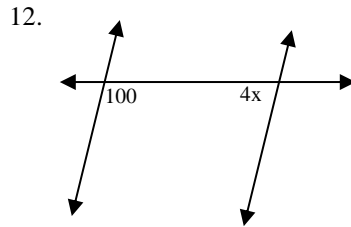
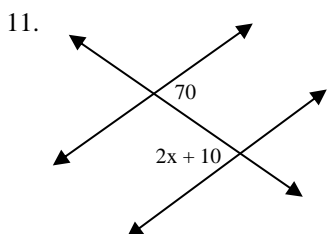
1. Complementary angles have a sum of \_\_\_\_\_.
2. Supplementary angles have a sum of \_\_\_\_\_.
3. Vertical angles are \_\_\_\_\_.
4. Corresponding angles are \_\_\_\_\_.
5. Alternate interior angles are \_\_\_\_\_.
6. Alternate exterior angles are \_\_\_\_\_.

Use the diagram to answer questions 7-10.

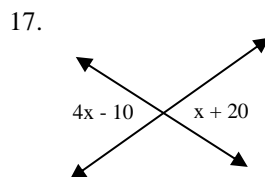


7. List all pairs of vertical angles
8. List all pairs of corresponding angles
9. List all pairs of alternate interior angles
10. List all pairs of alternate exterior angles

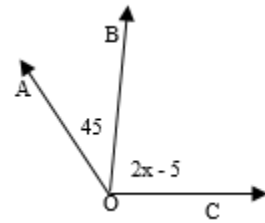
Solve for x.



16.  $\angle 1$  and  $\angle 2$  are complementary.  
 $m\angle 1 = 3x + 10$   
 $m\angle 2 = 2x$   
 Find x.

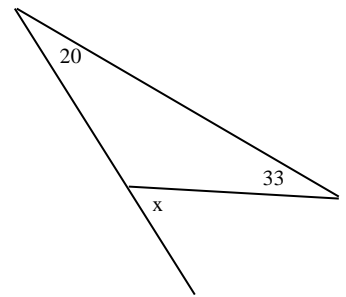


18.  $m\angle AOC = 130^\circ$

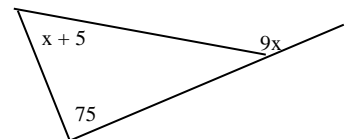


19.  $\angle 1$  and  $\angle 2$  are supplementary  
 $m\angle 1 = 3x$   
 $m\angle 2 = x + 20$   
 Find x.

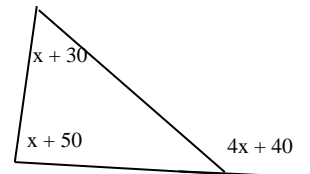
- 20.



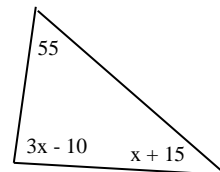
- 21.



- 22.

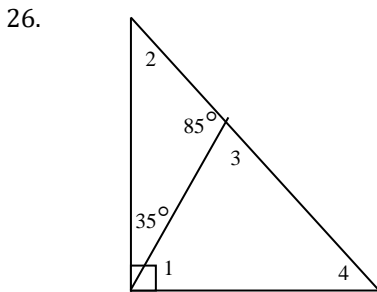
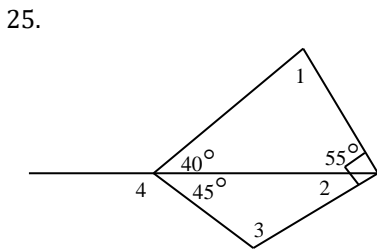
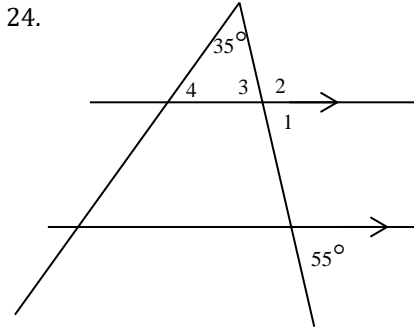


- 23.

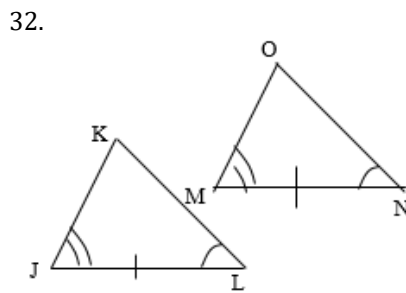
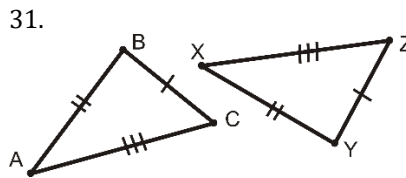
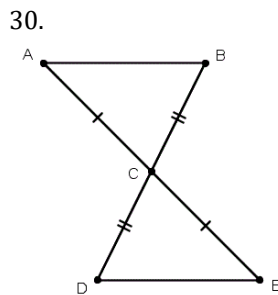
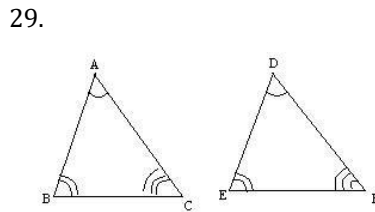
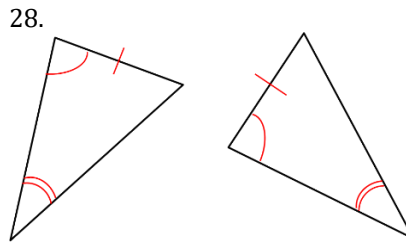
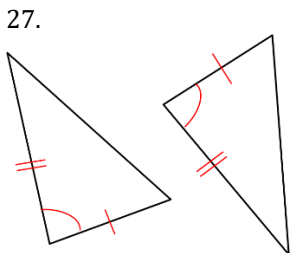


**Math 2: Final Review**

Find each numbered angle and give a reason for each answer.

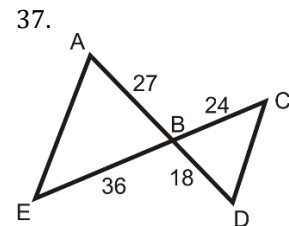
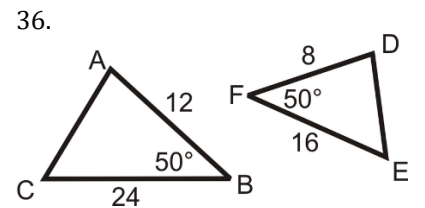
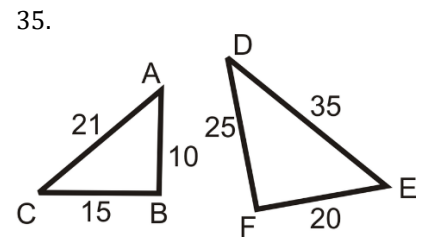
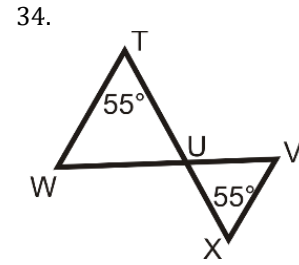


Determine if each pair of triangles is congruent, and if so, by which postulate (SSS, SAS, AAS, ASA). If they are congruent, write a congruence statement.



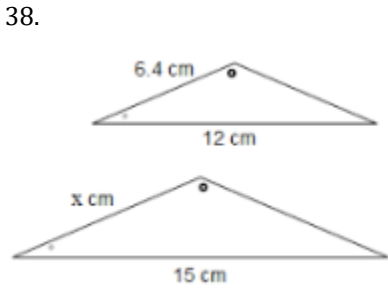
33. If  $\triangle ABC \cong \triangle XYZ$ , list all pairs of congruent sides and pairs of congruent angles.

Determine if each pair of triangles is similar, and if so by which postulate (SSS, SAS, AA). If they are similar, write a similarity statement.

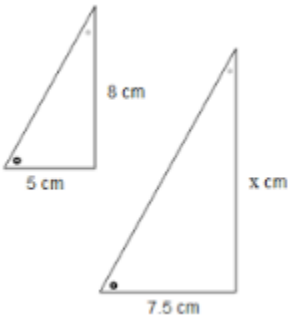


**Math 2: Final Review**

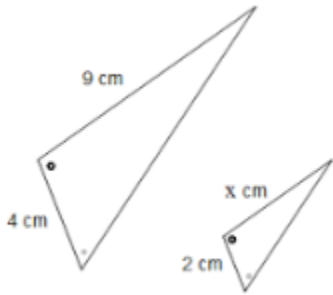
Given that the two figures are similar, solve for x.



39.



40.



Fill in the ratios using opp, adj, and hyp.

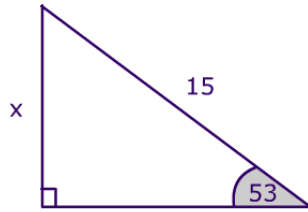
41.  $\sin\theta = \underline{\hspace{2cm}}$

42.  $\cos\theta = \underline{\hspace{2cm}}$

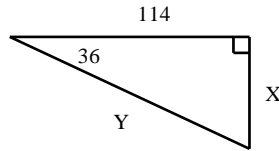
43.  $\tan\theta = \underline{\hspace{2cm}}$

Set up and solve a trig ratio to solve for each variable.

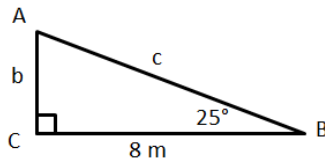
44. Solve for x.



45. Solve for X and Y.



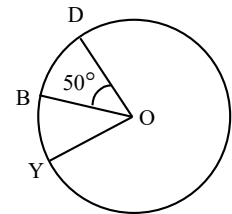
46. Solve for b and c



48. A 25-foot skateboard ramp with an 8-degree angle of elevation would have to start approximately how far from the wall?

49. A bike is parked 50 feet away from the base of a building. If the angle of elevation from the bike to the top of the building is  $27^\circ$ , find the height of the building.

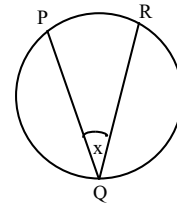
Use the diagram to answer the following questions.



50. Find  $m\widehat{BD}$

51. Find  $m\widehat{BYD}$

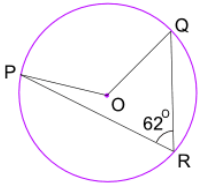
52. Find the value of x if  $m\widehat{PR} = 58^\circ$



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

## Math 2: Final Review

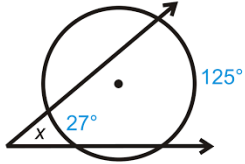
Use the diagram to answer the following questions.



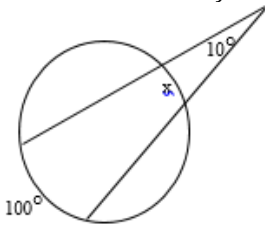
53. Find  $m\widehat{PQ}$

54. Find  $m\angle POQ$

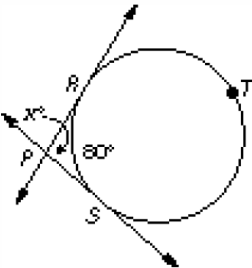
55. Find the value of  $x$ .



56. Find the measure of  $x$ .



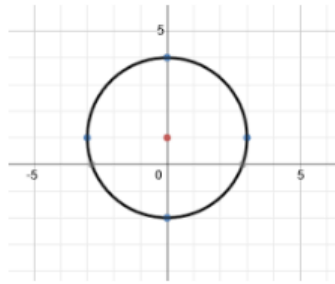
57. Find the value of  $x$ .



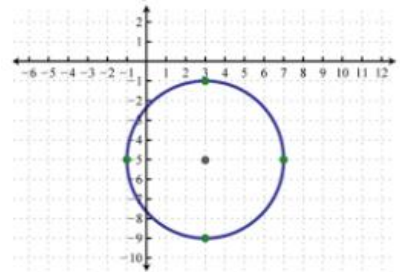
58. Find the value of  $x$ .



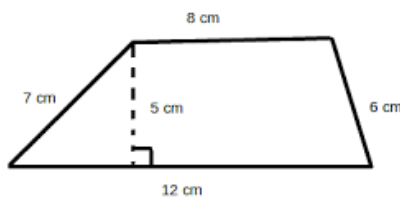
59. Write the equation of the circle.



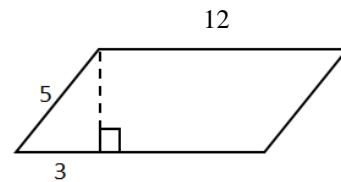
60. Write the equation of the circle.



61. Find the area of the figure.



62. Find the area of the figure.



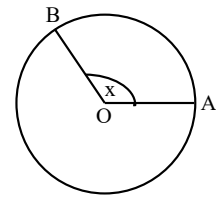
63. Find the circumference of a circle with a radius of 7 cm,

64. Find the area of a circle with a radius of 13 cm.

65. What formula do you use to calculate arc length?

66. What formula do you use to calculate the area of a sector?

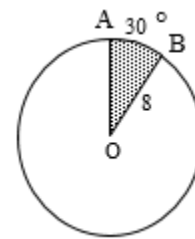
Use the diagram to answer the following questions.



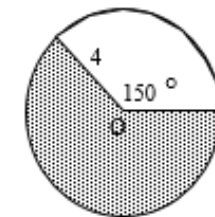
67. Find the length of  $\widehat{AB}$  if  $OA = 5$  and  $x = 140^\circ$

68. Find the area of the sector if  $OA = 4$  and  $x = 150^\circ$ .

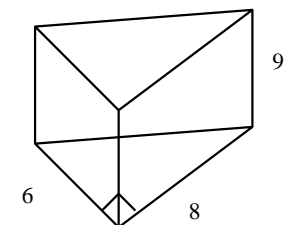
69. Find the area of the shaded sector



70. Find the area of the shaded sector

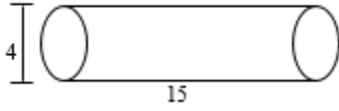


71. Calculate the surface area AND volume for the figure.

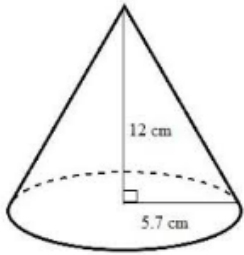


## Math 2: Final Review

72. Calculate the surface area AND volume for the figure.



73. Calculate the surface area AND volume for the figure.



74. Calculate the surface area AND volume for the figure.

