12.4 Name_____

1. Find the equation of the circle. Name the radius and the center.

$X^2 + 22x + y^2 - 22x - 50 = 0$

2. Write sin 42 in terms of cos. 3. Write cos 11 in terms of sine. 4. Convert 310 degrees to radians.

5. Make a family tree for the quadrilaterals

6. There is an eagle on the top of the flagpole. The eagle looks at the mouse on the ground at an angle of depression of 40 degrees. If the eagle is 30 feet from the mouse, find the height of the flagpole.

7. You and your friend are running for class president. You estimate there is a 35% chance you will win and a 25% chance your friend will win. What is the probability that you or our friend will win the election?

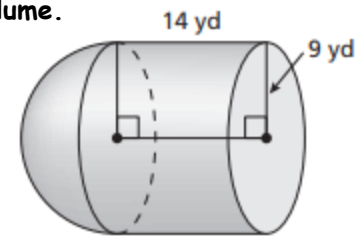
8.A card is drawn from a standard deck of cards. What is the probability of drawing a 5 or a black card?

9.A card is drawn from a standard deck of cards. Wht is the probability that the card is a 4 or a queen?

10. There are 55 cars in a used cars lot, 40 of which have air conditioning or are red. There are 18 red cars and 35 cars with air conditioning. What is the probability that a randomly selected car is red and has air conditioning?

11. Events A and B are dependent. Find the missing probability.
P(A) = 0.6
P(B/A) = 0.2
P(A and B) =_____

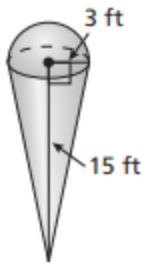
12.Find volume.



13. Three schools compete in a cross country invitational. Of the 15 athletes on your team, 9 achieve their goal times. Of the 20 athletes on the home team, 6 achieve their goal times. On your rival's team, 8 of the 13 athletes achieve their goal times. Organize the information in a two-way table. Then determine the probability that a randomly selected runner who achieves his or her goal time is from your school.

14. The shape of Mercury can be approximated by a sphere with a diameter of 4880 kilometers. Find the surface area and the volume of Mercury.

15. Find volume.



16. Sphere A is similar to Sphere B. The scale factor of the radii of Sphere A to Sphere B is 1 to 4. Sphere A has a radius of 6 units and a volume of 288 units^3. Find the volume of Sphere B.

17. About 79,000 people live in a circular region with a population density of about 513 people per square mile. Find the radius of the region.

18. Find the surface area of a sphere with a radius of 3.5 cm.

19. Find the surface area of the cone.