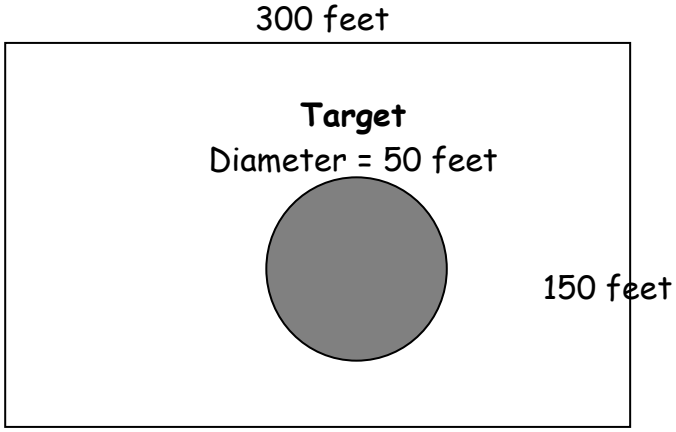
Algebra 2B Name_____

Carol the Parachutist and Friends

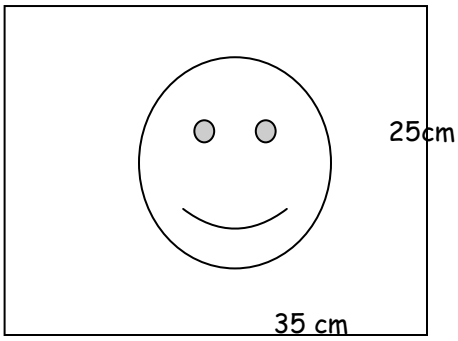
1. In competition, parachutists aim for a small circular target place in a field. Assume that when jumping for recreation, Carol controls her flight ONLY enough to guarantee that she will land in the field (somewhere).

a. What is the probability that she will land on the circular target? Show your work.



b. What is the probability that she will miss the target? Show your work.

2. **A point is randomly illuminated** on a rectangular computer game screen that looks like the figure shown below.



The smiley face head has a radius of 5 cm.
Each eye has a radius of 1 cm.
The game screen is a rectangle with dimensions 25 x 35 cm.

Find the probability of a light being illuminated in each place:

a. P(anywhere on the face)=

b. P(left eye)=

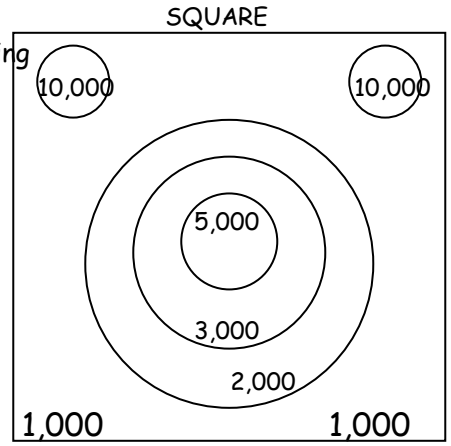
c. P(an eye)=

d) P(NOT on the face)

3) Elizabeth Zubal likes to play skeet ball at Chuck E Cheese. Considering she has no aim at all, there is no predicting where her ball will go.
Given the following radii, find each probability.

10,000 circles	r = 5 inches
5,000 circle	r = 6 inches
3,000 circle	r = 9 inches
2,000 circle	r = 12 inches

The length of each side of the square is 32 inches.



Show your work. **Give all of these answers in percentages.**

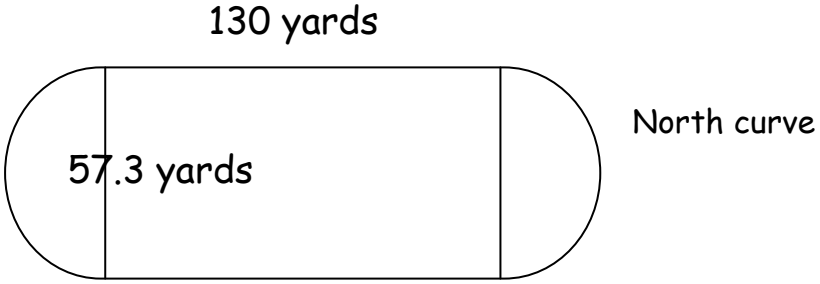
a) P(10,000)

b) P(2000)

c) P(At least 3000)

d) P(1000)

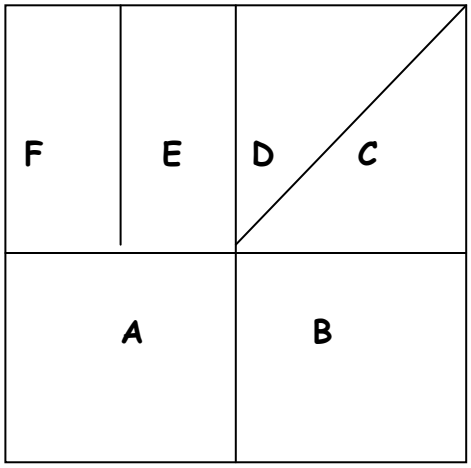
4) Mrs. Kores is running out on the track. A student needs to deliver a project before leaving school to avoid a disastrous grade. What is the probability that Mrs. Kores will be on the North curve (the closest part) of the track when the student delivers the project?



5) You leave your name to participate in the Rock Climb at Dicks Sporting Goods. They tell you it could be a three-hour wait. If you aren't there when they call your name, they skip you and go on to the next person. You leave the store for an hour and 20 minutes. What is the probability that you missed your turn during that 3 hour time?

What are the **odds in favor** of you being there at the right time and still getting to climb the wall?

6) An amateur is throwing a dart at the **square** board to the right. Assume any part of the board is equally likely to get hit. Find each answer.



a) P(hitting A)

b) P(hitting B or C)

c) P(NOT hitting F)

d) If F was cut into three equal sections, what would be the probability of hitting the top 1/3 section

e) Odds against landing on A

f) Odds in favor of landing on D

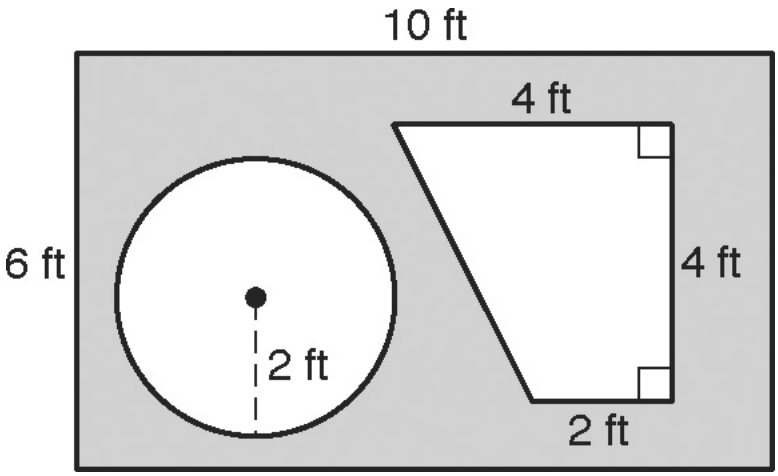
g) Odds against landing on A, B or C

h) Odds in favor of landing on E or F

i) Odds in favor of landing on A, B or D

j) Odds in favor of landing on F, C or B

7.) Mr. Surato is designing a state of the art sandbox for Matthew. He plans to install a circular ball pit and a trapezoidal castle creation station in the sandbox. Below are his blueprints.



a. What is the probability that Matthew throws his ball and it lands in the pit?

b. What is the probability that a squirrel drops a nut that lands on one of the castles?

c. Matthew's dog Payson likes to bury his bones. If he buries the bone in the sandbox, what is the probability that it will be in the shaded region of the blueprints?

d. If Matthew is outside playing in his ball pit, what is the probability that Mrs. Surato will find him in the sandbox?