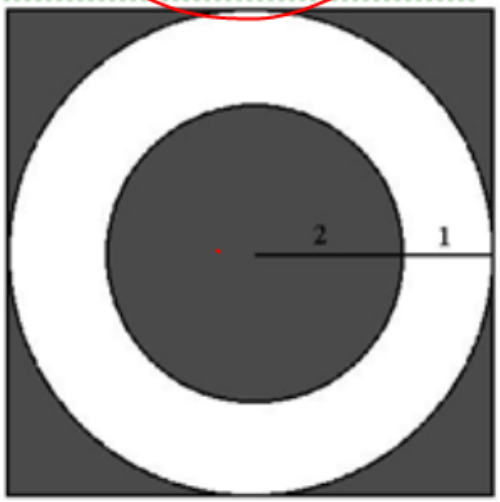
33. A new type of golf club claims to allow the user to hit a golf ball further than 150 yards 99% of the time. If this claim is true, and someone practices by hitting 125 golf balls, how many of those balls are expected to land **less than** 150 yards away? Round your answer to the nearest whole number.

$100 - 99 = 1\%$

$125 \cdot .01 = 1.25$

1

17. Find the probability of landing in the shaded area for the following dart board. Round your answer to the nearest thousandths place.



$A_{sq} = s^2 = 6^2 = 36$

$A_{smallcircle} = \pi(2)^2 = 4\pi$

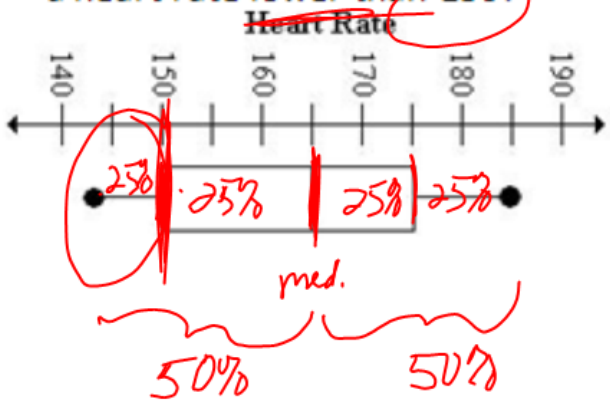
$A_{largecircle} = \pi(3)^2 = 9\pi$

$A_{unshaded} = 9\pi - 4\pi = 5\pi$

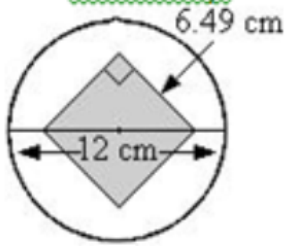
$A_{shaded}\ 36 - 5\pi \approx 20.29$

$\frac{20.29}{36}$

8. The different heart rates of people during a kickboxing class are represented in the box-and-whisker plot below. What percentage of people had a heart rate lower than 150?



27. A researcher was testing a new insect product. To do this, she needed a mosquito to land in a square area that was 6.49 cm on each side within a circular lab dish that had a diameter of 12 cm. What is the probability that the mosquito landed in the square section, if the entire inside of the dish was uniform? Round your answer to the nearest hundredth, if necessary.



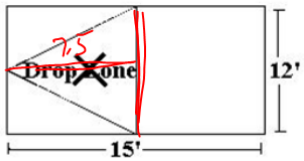
$A_{sq} = 6.49^2 = 42.1201$

$A_{circle} = \pi(6)^2 = 36\pi$

$\frac{42.1201}{(36\pi)}$

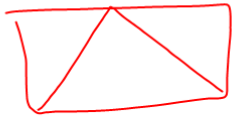
$\approx .37$

34. A helicopter training exercise requires that a helicopter crew drop a supply box into a specific drop zone. The drop zone is located within a 15 ' x 12 ' field and is in the shape of a triangle. The base of the triangle bisects the field. What is the probability that the flight crew will land the box in the drop zone?



$A_{rect} = 12(15) = 180$

$A_{tri} = \frac{1}{2}bh = \frac{1}{2}(12)(7.5) = 45$



$\frac{45}{180} = \frac{1}{4} = .25 = 25\%$

32. The probability of visiting a website on the Internet that does NOT open properly is 0.32. If Julius wants to visit 15 websites while researching his History project, how many of those websites can he expect to open properly? Round your answer to the nearest whole number.

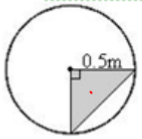
$1 - .32 = .68$ open

$.32 \cdot 15 = 4.8$ NOT

$15 - 4.8 = 10.2$

10

26. For a carnival game, a contestant must throw a beanbag onto a disk. If the beanbag hits the triangular section marked on the disk, the contestant wins a prize. The disk has a radius of 0.50 meters, as shown below. What is the probability of winning the prize, if skill level is not a factor? Round your answer to the nearest hundredth, if necessary.



$A_{tri} = \frac{1}{2}(.5)(.5) = .125$

$A_{circle} = \pi(.5)^2 = .25\pi$

$\frac{.125}{.25\pi}$