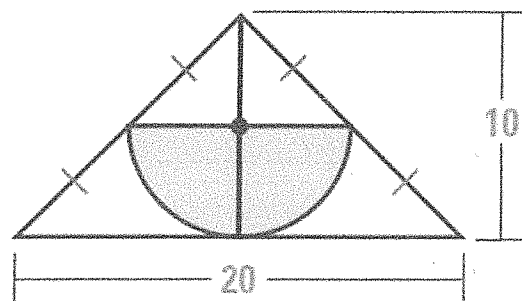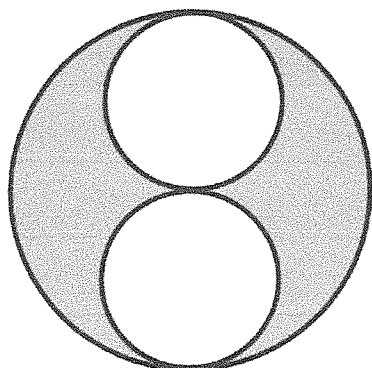1. Find the probability that a randomly chosen point in the figure lies in the shaded region. Give answer as a percent rounded to the nearest tenth.
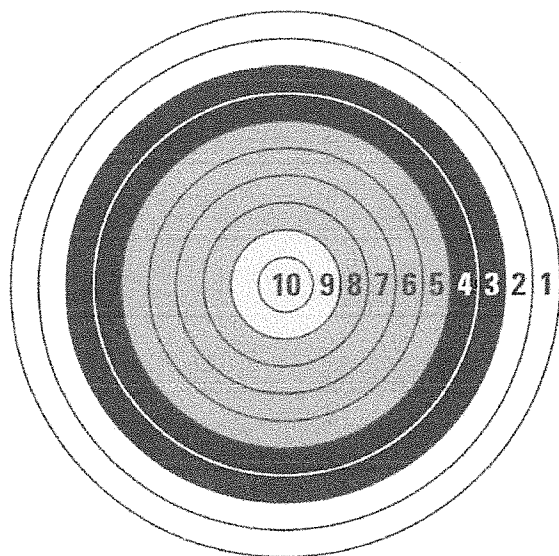

2. Find the probability that a randomly chosen point in the big circle lies in the shaded region. Give answer as a percent rounded to the nearest hundredth. Diameter of the large circle is 24 cm.

3. Imagine that an arrow hitting the target shown is equally likely to hit any point on the target. The 10-point circle has a 4.8 inch diameter and each of the other rings is 2.4 inches wide. Find the probability that the arrow hits the region described. Give answer as a percent to the nearest tenth.
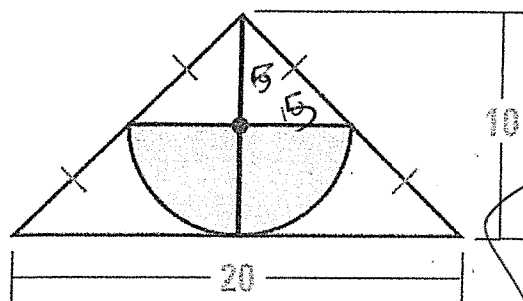
a) P(region 8)   b) P(regions 4, 3, 2, or 1)

1. Find the probability that a randomly chosen point in the figure lies in the shaded region. Give answer as a percent rounded to the nearest tenth.

Area of $\triangle = \frac{1}{2}(20)(10) = 100$

Area of semi circle $= \frac{1}{2}(\pi)(5)^2$ 12.5π
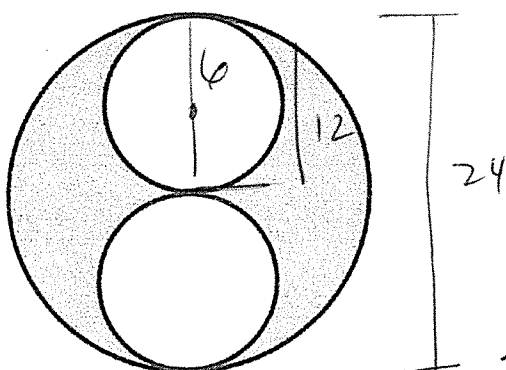
50π

50π $\frac{12.5\pi}{100}$

39.3%

2. Find the probability that a randomly chosen point in the big circle lies in the shaded region. Give answer as a percent rounded to the nearest hundredth. Diameter of the large circle is 24 cm.
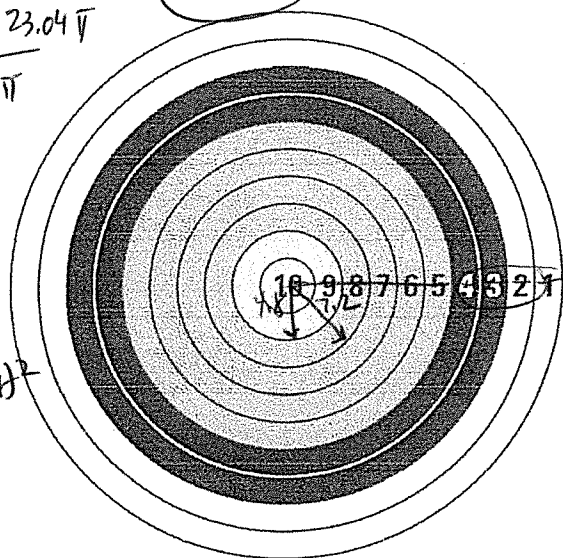
area large circle $= \pi(12)^2$
$= 144\pi$

area of 2 small circles $2\pi(6)^2$
72π

50%

$\frac{144\pi - 72\pi}{144\pi} = \frac{72\pi}{144\pi} = \frac{1}{2}$

3. Imagine that an arrow hitting the target shown is equally likely to hit any point on the target. The 10-point circle has a 4.8 inch diameter and each of the other rings is 2.4 inches wide. Find the probability that the arrow hits the region described. Give answer as a percent to the nearest tenth.

a) P(region 8) 5% $r = 2.4$

b) P(regions 4, 3, 2, or 1)

64%

$\frac{51.84\pi - 23.04\pi}{576\pi}$

region 8

$\pi(7.2)^2 - \pi(4.8)^2$

5

$\frac{28.8\pi}{576\pi}$

5%

Radius of Target
$10(2.4) = 24\,in$

area of target
$= \pi(24)^2$
576π

207.36

$\frac{576\pi - \pi(14.4)^2}{576\pi}$

$\frac{368.64\pi}{576\pi} =$

1