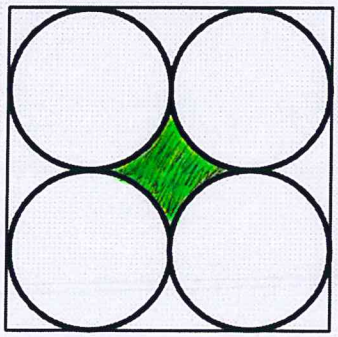
Bellwork Alg 2B Monday, April 16, 2018

1. Find the probability that a randomly chosen point in the square lies in the shaded region. Give answer as a percent rounded to the nearest hundredth. The radius of each circle is 4 in.



P(Shaded Region) =

2. The probability that I wear a green shirt is $\frac{3}{8}$, the probability that I wear black pants is $\frac{2}{7}$, and the probability that I wear blue pants is $\frac{5}{12}$. Find each probability as a percent to the nearest tenth.

a). The probability that I wear a green shirt or I wear black pants to work today.

P(green shirt or black pants) =

b) The probability that I wear a pair of black pants or a pair of blue pants.

P(black pants or blue pants) =

3. You go into the back yard and shoot some arrows at a target. The package of arrows has 3 with red feathers, 8 with blue feathers, and 2 with green feathers. You pull out an arrow at random and shoot it at the target. You missed the bulls-eye so you grab another arrow at random and shoot it, etc. Find each probability as a fraction without reducing.

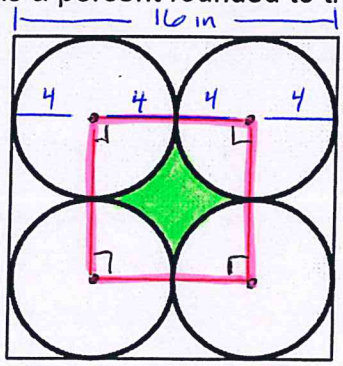
a) P(green arrow and blue arrow)=

b) P(red arrow and red arrow and green arrow)=

Bellwork Alg 2B Monday, April 16, 2018

Answers

1. Find the probability that a randomly chosen point in the square lies in the shaded region. Give answer as a percent rounded to the nearest hundredth. The radius of each circle is 4 in.



Area of Big Sq = $16^2 = 256$ in^2

P(Shaded Region) = $\frac{\text{Area of shaded Region}}{\text{Area of Big Sq}}$

$= \frac{64 - 16\pi}{256} =$ 5.87%

Area of shaded region
= 8m sq − circle
= $8^2 - \pi(4)^2$
= $64 - 16\pi$

There are other ways to find this answer

2. The probability that I wear a green shirt is $\frac{3}{8}$, the probability that I wear black pants is $\frac{2}{7}$, and the probability that I wear blue pants is $\frac{5}{12}$. Find each probability as a percent to the nearest tenth.

a). The probability that I wear a green shirt or I wear black pants to work today.

NOT MUTUALLY EXCLUSIVE (They CAN happen at the same time)

P(green shirt or black pants) =

$\frac{3}{8} + \frac{2}{7} - \frac{3}{8} \cdot \frac{2}{7} =$ 55.4%

b) The probability that I wear a pair of black pants or a pair of blue pants.

MUTUALLY EXCLUSIVE (these won't happen at the same time)

P(black pants or blue pants) =

$\frac{2}{7} + \frac{5}{12} =$ 70.2%

3. You go into the back yard and shoot some arrows at a target. The package of arrows has 3 with red feathers, 8 with blue feathers, and 2 with green feathers. You pull out an arrow at random and shoot it at the target. You missed the bulls-eye so you grab another arrow at random and shoot it, etc. Find each probability as a fraction without reducing. TOTAL OF 13 ARROWS

a) P(green arrow and blue arrow)= arrow)=

$= \frac{2}{13} \cdot \frac{8}{12}$

$= \frac{16}{156}$

b) P(red arrow and red arrow and green

$= \frac{3}{13} \cdot \frac{2}{12} \cdot \frac{2}{11}$

$= \frac{12}{1716}$