# Bellwork    Alg 2B    Friday, April 13, 2018

1. On a key pad are the digits 0 to 9. You randomly press one of the digits then you randomly press another one. Find this probability as a percent to the nearest tenth..

a) P(Odd and Even)=

b) P(Multiple of 3 and Factor of 8)=

2. At an amusement park there is a game where you have to throw a ball at a target and if you hit it you win a prize. You pay $2 and get two throws. In a basket are the following balls to choose from: 12 red, 7 green, and 11 orange. You randomly grab a ball and throw it at the target. You then randomly grab another ball and throw it at the target. Find each probability as a fraction without reducing.

a) P(Green and Green)=

b) P(Red and Orange)=

3. Find the probability that if a dart lands inside the square it will land in the shaded region. Give your answer as a percent rounded to the nearest hundredth. The perimeter of the square is 60 in.
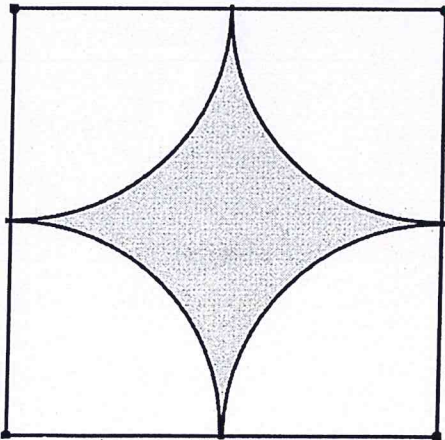

P(Shaded Region)=

4. You deal the first four cards on the top of the deck to the first four people at the table. Find the probability of dealing four aces. Give your answer as a percent to the nearest hundredth.

P(four aces)=

1. On a key pad are the digits 0 to 9. You randomly press one of the digits then you randomly press another one. Find this probability as a percent to the nearest tenth.. *INDEPENDENT EVENTS*

a) P(Odd and Even)= **25%**

1,3,5,7,9    0,2,4,6,8

$$\frac{5}{10} \cdot \frac{5}{10} = \frac{25}{100}$$

b) P(Multiple of 3 and Factor of 8)= **12%**

3, 6, 9        1, 8, 2, 4

$$\frac{3}{10} \cdot \frac{4}{10} = \frac{12}{100}$$

2. At an amusement park there is a game where you have to throw a ball at a target and if you hit it you win a prize. You pay $2 and get two throws. In a basket are the following balls to choose from: 12 red, 7 green, and 11 orange. You randomly grab a ball and throw it at the target. You then randomly grab another ball and throw it at the target. Find each probability as a fraction without reducing. *DEPENDENT EVENTS*
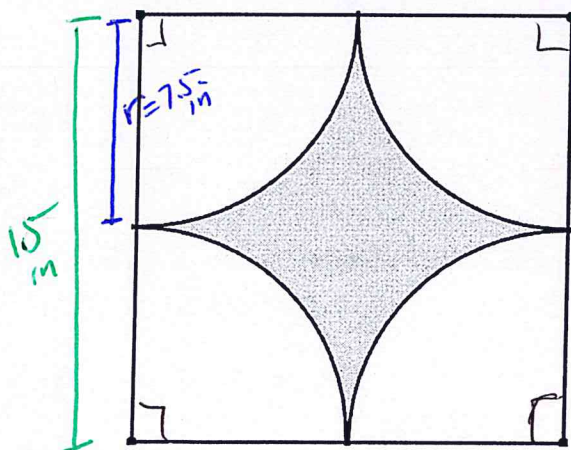
30 TOTAL

a) P(Green and Green)=

$$\frac{7}{30} \cdot \frac{6}{29} = \boxed{\frac{42}{870}}$$

b) P(Red and Orange)=

$$\frac{12}{30} \cdot \frac{11}{29} = \boxed{\frac{132}{870}}$$

3. Find the probability that if a dart lands inside the square it will land in the shaded region. Give your answer as a percent rounded to the nearest hundredth. The perimeter of the square is 60 in.



r = 7.5 in

15 in

EACH SIDE OF THE SQ
$$= \frac{60}{4} = 15 \text{ in}$$

AREA OF THE SQ
$$= (15 \text{ in})^2$$
$$= 225 \text{ in}^2$$

$$\frac{\text{SHADED Region}}{\text{square}} = \frac{SQ - CIRCLE}{SQ}$$

$$= \frac{225 - \pi (7.5)^2}{225}$$

P(Shaded Region)= **21.46%**

4. You deal the first four cards on the top of the deck to the first four people at the table. Find the probability of dealing four aces. Give your answer as a percent to the nearest hundredth.

P(four aces)= **$3.69 \times 10^{-4}$ %**

there are 4 aces in a standard deck of 52 cards

$$\frac{4}{52} \cdot \frac{3}{51} \cdot \frac{2}{50} \cdot \frac{1}{49}$$

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