Algebra 2 Bellwork Wednesday, May 20, 2015

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)=

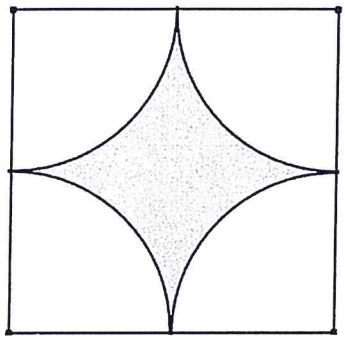
b) P(Multiple of 3 and Factor of 8)=

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 this probability as a fraction:

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 area of the square is 225 in^2.

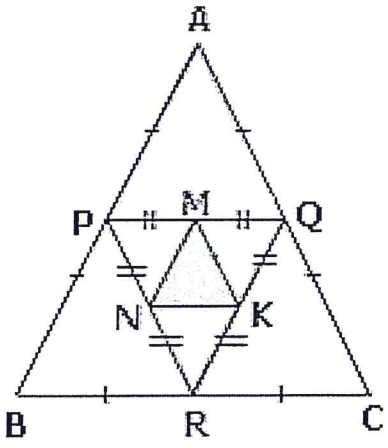


P(Shaded Region)=

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)=

5. Find the probability that if you throw a dart at equilateral triangle ABC that it lands in the shaded region. Give your answer as a percent to the nearest tenth.



P(Shaded Region)=

Algebra 2 Bellwork Wednesday, May 20, 2015 ANSWERS

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)=

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

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

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

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 this probability as a fraction:

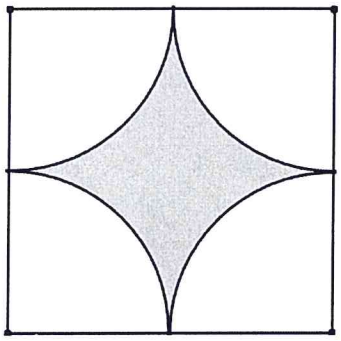
a) P(Green and Green)=

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

b) P(Red and Orange)=

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

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 area of the square is 225 in^2.



Area of SQ = 225 in^2

side of SQ = $\sqrt{225}$ = 15 in

radius of circle = 7.5 in

Area of circle = $\pi(7.5)^2$ in^2

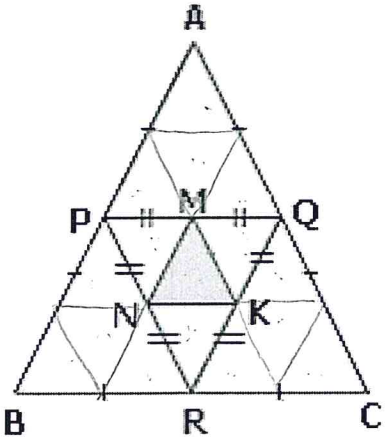
$\frac{SQ - 1 \text{ circle}}{SQ} = \frac{225 - \pi(7.5)^2}{225}$

P(Shaded Region)= 21.5%

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)= $\frac{4}{52} \cdot \frac{3}{51} \cdot \frac{2}{50} \cdot \frac{1}{49} =$ 0.0004 %

5. Find the probability that if you throw a dart at equilateral triangle ABC that it lands in the shaded region. Give your answer as a percent to the nearest tenth.



P(Shaded Region)= $\frac{1}{16} =$ 6.3%