Bellwork Alg 2B Tuesday, May 1, 2018

1. When I go to McDonals's the probability that I get a cheeseburger is $\frac{4}{9}$, the probability that I get some fries is $\frac{7}{13}$. Find the following probability as a percent to the nearest hundredth.

P(get cheeseburger or get fries)=

2. I'm going to make a shake at home by putting some vanilla ice cream in a blender along with some other ingredients. I have the following other ingredients to choose from:

4 fruits: bananas, peaches, blueberries, strawberries

5 sauces: caramel, butterscotch, milk chocolate, dark chocolate, white chocolate

5 nuts: peanuts, cashews, walnuts, macadamia nuts, almonds

a) How many different shakes can I make if I want 2 fruits, 2 sauces, and 2 nuts?

b) I'm going to share my shake with my sister. I want 3 fruits and she only wants 3 sauces. How many different shakes are possible if we get one with 3 fruits or one with 3 sauces?

3. When you buy a burger at White Castle there is a 20% chance the bun is stale. If you buy an 8-pack of burgers find the following probability as a percent to the nearest tenth.

P(at least 6 of the buns are stale) =

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ANSWERS

1. When I go to McDonals's the probability that I get a cheeseburger is $\frac{4}{9}$, the probability that I get some fries is $\frac{7}{13}$. Find the following probability as a percent to the nearest hundredth.

P(get cheeseburger or get fries)=

$\frac{4}{9} + \frac{7}{13} - \frac{4}{9} \cdot \frac{7}{13} =$ **74.36%**

These two events CAN happen together

2. I'm going to make a shake at home by putting some vanilla ice cream in a blender along with some other ingredients. I have the following other ingredients to choose from:

4 fruits: bananas, peaches, blueberries, strawberries

5 sauces: caramel, butterscotch, milk chocolate, dark chocolate, white chocolate

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a) How many different shakes can I make if I want 2 fruits, 2 sauces, and 2 nuts?

2 fruits and 2 sauces and 2 nuts

$${}_4C_2 \cdot {}_5C_2 \cdot {}_5C_2$$

$= 6 \cdot 10 \cdot 10 =$ **600**

b) I'm going to share my shake with my sister. I want 3 fruits and she only wants 3 sauces. How many different shakes are possible if we get one with 3 fruits or one with 3 sauces?

3 fruits or 3 sauces

$${}_4C_3 + {}_5C_3$$

$4 + 10 =$ **14**

3. When you buy a burger at White Castle there is a 20% chance the bun is stale. If you buy an 8-pack of burgers find the following probability as a percent to the nearest tenth.

P(at least 6 of the buns are stale) =

p(success) = .2 p(failure) = .8

6 or more

prob 6 ${}_8C_6 (.2)^6 (.8)^2 = 0.11\%$

or

prob 7 ${}_8C_7 (.2)^7 (.8)^1 = 0.01\%$

or

prob 8 ${}_8C_8 (.2)^8 = 0.0003\%$

.1%