May 17, 2012 M7H

Get out your homework

5/17 - Basic Counting Principle, Sample Space and Simple Probability

If you were to choose one item from each category in order to create a meal, how many meals could you create?

Main Dish	Side Dish	Drink	Dessert
pizza	~~tater tots~~	milk	cookie
chicken sand.	fries	choc. milk	ice cream
salad	fruit	OJ	jello
	veg ies		

$3 \cdot 4 \cdot 3 \cdot 3$

$= 108$ possibilities

If you were to choose one item from each category in order to create an outfit, how many outfits could you create?

Top	Bottom	Shoes
T-shirt	Shorts	Running Shoes
Jersey	Gym Shorts	Sandals
Dress Shirt	Jeans	
Tank		

4 · 3 · 2

= 24 outfits

Create an abbreviated Sample Space for the information on the last page.

T-shirt
Jersey
Dress
Tank

Short
Gym
Jeans

Running
Sandals

Explains everyone of the 24 possibilities

TSR JSR DSR +SR
TSs JSs DSs +Ss
TGR JGR DGR +GR
TGs JGs DGs +Gs
TJR JJR DJR +JR
TJs JJs DJs +Js

Create an abbreviated Sample Space for flipping a coin and then rolling a 6-sided die.

2  Heads Tails

x

 1 4 2 5 3 6

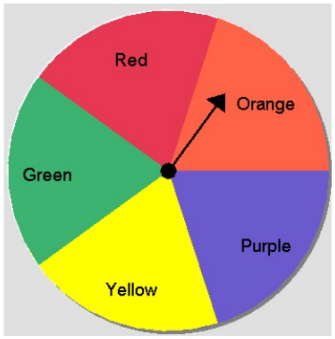
6

=12

H1 H2 H3 H4 H5 H6

T1 T2 T3 T4 T5 T6

Create an abbreviated Sample Space for spinning this spinner then flipping a coin.



RH PH GH

RT PT GT

OH YH

OT YT

$$\text{Probability of an event happening} = \frac{\text{Number of ways the event can occur}}{\text{Total number of possible events}}$$

What is the probability of drawing a red marble out of this pile?

$$\text{Probability} = \frac{2}{10} = \frac{1}{5}$$

(2 ← # of Red; 10 ← # of all marbles)

What is the probability of drawing a blue marble?

$\frac{3}{10}$

a green?

$\frac{5}{10} = \frac{1}{2}$

What is the probability of ***not*** drawing a red marble?

$\frac{8}{10} = \frac{4}{5}$

What is the probability of randomly drawing a red card from this group?

$\frac{3}{10}$

P(2)= $\frac{1}{10}$

P(even)= $\frac{5}{10} = \frac{1}{2}$ (count 0)

P(less than 4)= $\frac{4}{10} = \frac{2}{5}$

P(not purple)= $\frac{7}{10}$

Homework

Green Probability WS1

Due Friday