Algebra 2 Bellwork Wednesday, May 27, 2015

1. The probability that on vacation I go to Hawaii is 24%. The probability that on vacation I get sunburned is 75%. Find the following probability as a percent rounded to the nearest tenth.

P(go to Hawaii or get sunburned)=

2. You are going to take a cooler with drinks to the beach. In the fridge there are 4 different kinds of cola, 6 different juices, and 8 different flavors of Gatorade.

a) Find the number of ways you could take one of each kind of drink.

b) Find the number of ways you could take 2 different colas or 3 different juices.

c) Find the number of ways you could take 4 different juices and 3 different flavors of Gatorade.

3. Use the results of the survey about what people are afraid of to find each probability as fraction:

	Snakes	Spiders	Mice	Dogs	Total
Boys	23	14	5	2	44
Girls	35	20	8	3	66
Total	58	34	13	5	110

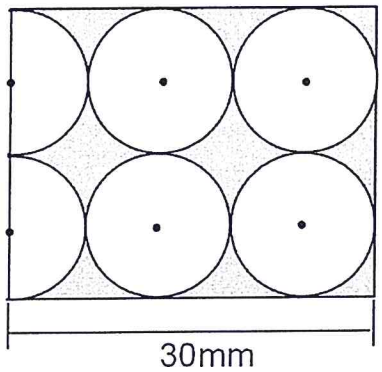
a) P(Snakes | Boys)=

b) P(Mice and Girls)=

c) P(Boys or Spiders)=

d) P(Girls | Dogs)=

4. Find the probability that a random point is in the shaded region. Give your answer as a percent to the nearest hundredth.



5. The office is adding 8 more desks for new workers. Each desk is going to get a phone with its own phone number. How many ways can you assign a separate phone number to each desk?

6. A company needs to send 4 of it's workers to 4 different manufacturing plants in different states. The boss has 7 workers to choose from. How many ways can the boss assign a worker to go to each of these manufacturing plants?

Algebra 2 Bellwork Wednesday, May 27, 2015 ANSWERS

1. The probability that on vacation I go to Hawaii is 24%. The probability that on vacation I get sunburned is 75%. Find the following probability as a percent rounded to the nearest tenth. NOT MUTUALLY EXCLUSIVE

P(go to Hawaii or get sunburned)=

$24\% + 75\% - (24\%)(75\%) = \boxed{81.0\%}$

2. You are going to take a cooler with drinks to the beach. In the fridge there are 4 different kinds of cola, 6 different juices, and 8 different flavors of Gatorade.

a) Find the number of ways you could take one of each kind of drink.

$4 \cdot 6 \cdot 8 = \boxed{192}$

b) Find the number of ways you could take 2 different colas or 3 different juices.

$_4C_2 + {}_6C_3 = 6 + 20 = \boxed{26}$

c) Find the number of ways you could take 4 different juices and 3 different flavors of Gatorade.

$_6C_4 \cdot {}_8C_3 = 15 \cdot 56 = \boxed{840}$

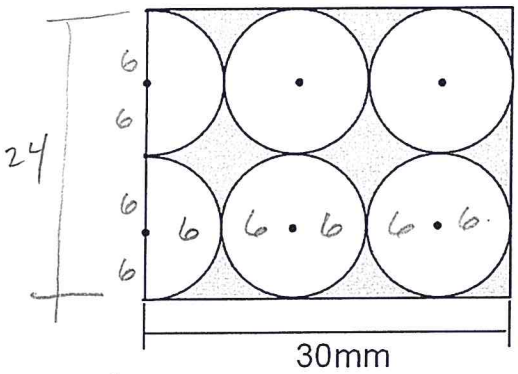
3. Use the results of the survey about what people are afraid of to find each probability as fraction:

	Snakes	Spiders	Mice	Dogs	Total
Boys	23	14	5	2	44
Girls	35	20	8	3	66
Total	58	34	13	5	110

a) P(Snakes | Boys)= $\frac{23}{44}$ b) P(Mice and Girls)= $\frac{8}{110}$

c) P(Boys or Spiders)= $\frac{64}{110}$ d) P(Girls | Dogs)= $\frac{3}{5}$

4. Find the probability that a random point is in the shaded region. Give your answer as a percent to the nearest hundredth.



$\frac{\text{Rec} - 5 \text{ circles}}{\text{Rec}} = \frac{720 - 5(36\pi)}{720}$

Rec $= 720 \text{ mm}^2$

circle $= \pi(6)^2 = 36\pi \text{ mm}^2$

$= \boxed{21.46\%}$

5. The office is adding 8 more desks for new workers. Each desk is going to get a phone with its own phone number. How many ways can you assign a separate phone number to each desk?

$_8P_8$ or $8! = \boxed{40,320}$

6. A company needs to send 4 of it's workers to 4 different manufacturing plants in different states. The boss has 7 workers to choose from. How many ways can the boss assign a worker to go to each of these manufacturing plants?

$_7P_4 = \boxed{840}$