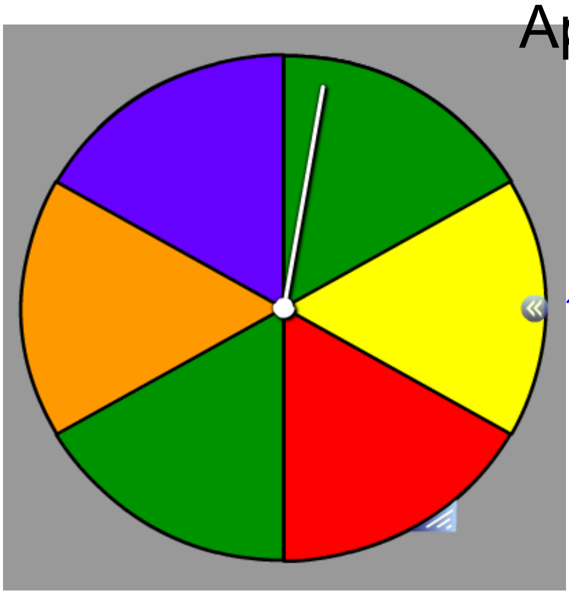
Warm Up Grade 8

April 14, 2016



1) What is the probability of spinning the spinner three times and getting red,green, blue?

$P(R,G,B) = P(R) \times P(G) \times P(B)$

$= \frac{1}{6} \times \frac{2}{6} \times \frac{1}{6}$

$= \frac{1}{6} \times \frac{1}{3} \times \frac{1}{6}$

$= \frac{1}{108}$

2) What is the probability of spinning the spinner twice and not getting a green?

$P(No G, No G) = P(No G) \times P(No G)$

$= \frac{4}{6} \times \frac{4}{6}$

$\frac{2}{3} \times \frac{2}{3}$

$\frac{4}{9}$

$= 0.44 = 44\%$

pg420

Go over homework pg. 420 # 4-7
pg. 425 # 3,7

pg.420 (# 1 to #3)

1. 4 events   Prob (A and B and C and D) = P(A) x P(B) x P(C) X P(D)

5 Events   P(A and B and C and D and E) = P(A) x P(B) x P(C) x P(D) x P(E)

2. All the possible outcomes for the weather are exactly one of these two events:
it rains in all 3 cities or it doesn't rain in all 3 cities.
So subtract the answer from 1 (or 100%)

1 - 0.0975= 0.9025 or 90.25%

3. Since the cities are in different provinces, they are far enough apart that it is unlikely that the weather in one city on a particular day would affect the weather in a different city on the same day.

Go over homework pg. 420 # 4-7
pg. 425 # 3,7

4. a) $Prob(3H) = P(H) \times P(H) \times P(H)$

$= \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$

$= \frac{1}{8}$

b) $P(3T) = P(T) \times P(T) \times P(T)$

$= \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$

$= \frac{1}{8}$

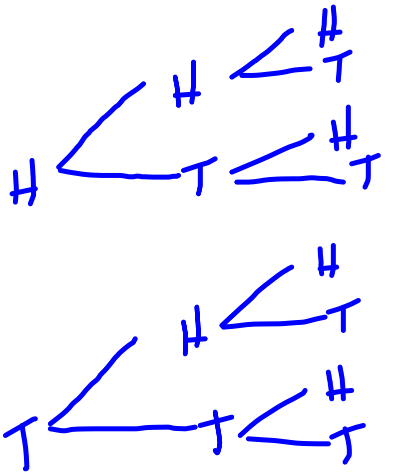
c) $P(T, H, T) = P(T) \times P(H) \times P(T)$

$= \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$

$= \frac{1}{8}$

Tree Diagram

1st 2nd 3rd



Outcomes
HHH (a)
HHT
HTH
HTT
THH
THT (c)
TTH
TTT (b)

5.

☆a) $P(R2, B3, G4) = P(R2) \times P(B3) \times P(G4)$

$= \frac{1}{6} \times \frac{1}{6} \times \frac{1}{6}$

$= \frac{1}{216}$

Go over homework pg. 420 # 4-7
pg. 425 # 3,7

☆b) $P(R4, B\text{even}, G<3) = P(R4) \times P(B\text{even}) \times P(G<3)$

$= \frac{1}{6} \times \frac{3}{6} \times \frac{2}{6}$

$= \frac{1}{6} \times \frac{1}{2} \times \frac{1}{3}$

$= \frac{1}{36}$

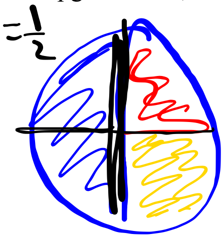
6. a) $P(R, B, Y) = P(R) \times P(B) \times P(Y)$

$= \frac{1}{4} \times \frac{1}{2} \times \frac{1}{4}$

$= \frac{1}{32}$

Go over homework pg. 420 # 4-7
pg. 425 # 3,7

$P(B) = \frac{2}{4} = \frac{1}{2}$



b) $P(B, B, \text{not } R) = P(B) \times P(B) \times P(\text{not } R)$

$= \frac{1}{2} \times \frac{1}{2} \times \frac{3}{4}$

$= \frac{3}{16}$

c) $P(B, B, B) = P(B) \times P(B) \times P(B)$

$= \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$

$= \frac{1}{8}$

7. $P(1^{st}, 2^{nd}, 3^{rd}, 4^{th}) = P(1^{st}) \times P(2^{nd}) \times P(3^{rd}) \times P(4^{th})$

$= \frac{1}{10} \times \frac{1}{10} \times \frac{1}{10} \times \frac{1}{10}$

$= \frac{1}{10\,000}$

___ ___ ___ ___

0-9 (10 out), 0-9 (10 #), 0-9 (10 #), 0-9 (10 #)

Page 425

3 & 7

Go over homework pg. 420 # 4-7
pg. 425 # 3,7

3a) The bar graph tells you **the number** of awards each dog has won.

3b) Most situations you are more interested in the number of awards a dog wins, not their percentage, so that is why I like the.bar graph better.

3c) No you could not use a line graph to represent the awards different dogs won since it is not a change in wards that one certain dog won.

3d) Yes you can use a pictograph to display the amount of award a dog won as long as you choose an appropriate symbol and key.

7) Wrong pizza Orders Graph 2 is misleading since it does not start the horizontal axis at zero. It makes you that pizza party get 12 times more wrong pizza orders than pizza place.

Class/Homework

13 ♡ A, 2, 3, 4, 5, 6, 7, 8, 9, 10, J, K, Q
13 ◇
13 ♤
13 ♧

Page 421 # 9 , #10, #11, #12, #13

Page 426-427 # 5 , #10, #12, #15,

(All solutions will be posted in this lesson in case you want to check before the test tomorrow)

Test Friday (Tomorrow) April 15

Part A

8 Multiple Choice /33

Part B

1) 3 thing you can read off of graph or Not
2) Which is misleading and Why?
3) Probability using spinners
4) Probability of more than one event

10) a) P(1st righ, 2nd rig, 3rd right, 4th right, 5th right) ← all right

$= P(1^{st}) \times P(2^{nd}) \times P(3^{rd}) \times P(4^{th}) \times P(5^{th})$

$= \frac{1}{4} \times \frac{1}{4} \times \frac{1}{4} \times \frac{1}{4} \times \frac{1}{4}$

$= \frac{1}{1024}$

b) P(corr, corr, corr, incor, inc)

$= P(corr) \times P(corr) \times P(corr) \times P(inc) \times P(incor)$

$\frac{1}{4} \times \frac{1}{4} \times \frac{1}{4} \times \frac{3}{4} \times \frac{3}{4}$

$\frac{9}{1024}$

8a) $P(W, W, W) = P(W) \times P(W) \times P(W)$

$= \frac{1}{10} \times \frac{1}{10} \times \frac{1}{10}$

$= \frac{1}{1000}$

Page 421 # 9 , #10, #11, #12, #13

b) $P(W) = \frac{1}{10}$

c) P(Not W, NW, NW, NW)

$= P(NW) \times P(NW) \times P(NW) \times P(NW)$

$= \frac{9}{10} \times \frac{9}{10} \times \frac{9}{10} \times \frac{9}{10}$

$= \frac{6561}{10000}$

Page 421 # 9 , #10, #11, #12, #13

pg 421

Nadine Josh Shirley

9. $P(3H) = P(H) \times P(H) \times P(H)$

$= \frac{1}{4} \times \frac{1}{4} \times \frac{1}{4}$

$= \frac{1}{64}$

b) Prob(Spade, spade, Red)

$= P(S) \times P(S) \times P(R)$

$= \frac{1}{4} \times \frac{1}{4} \times \frac{1}{2}$

$= \frac{1}{32}$

c) P(not H, black, ace)

$P(\text{not }H) \times P(\text{black}) \times P(A)$

$\frac{3}{4} \times \frac{1}{2} \times \frac{4}{52}$

$= \frac{3}{4} \times \frac{1}{2} \times \frac{1}{13}$

$= \frac{3}{104}$

10 a) P(All 5 correct) Page 421 # 9 , #10, #11, #12, #13

$= P(C) \times P(C) \times P(C) \times P(C) \times P(C)$

$= \frac{1}{4} \times \frac{1}{4} \times \frac{1}{4} \times \frac{1}{4} \times \frac{1}{4}$

$= \frac{1}{1024}$

b) P(only first 3 correct)

$P(C) \times P(C) \times P(C) \times P(W) \times P(W)$

$= \frac{1}{4} \times \frac{1}{4} \times \frac{1}{4} \times \frac{3}{4} \times \frac{3}{4}$

$= \frac{9}{1024}$

c)

P(all 5 wrong) $= P(W) \times P(W) \times P(W) \times P(W) \times$

$= \frac{3}{4} \times \frac{3}{4} \times \frac{3}{4} \times \frac{3}{4} \times \frac{3}{4}$

$= \frac{243}{1024}$

Page 421 # 9 , #10, #11, #12, #13

11. P(3 correct letters)

$= P(1^{st}\text{ correct}) \times P(2^{nd}\text{ correct}) \times P(3^{rd}\text{ cor})$

$= \frac{1}{26} \times \frac{1}{26} \times \frac{1}{26}$

$= \frac{1}{17576}$

12a) $P(3\text{ Beatles}) = P(B) \times P(B) \times P(B)$

$= \frac{6}{16} \times \frac{6}{16} \times \frac{6}{16}$

$= \frac{3}{8} \times \frac{3}{8} \times \frac{3}{8}$

$= \frac{27}{512}$

b) P(RS, RS, B, B)

$= P(RS) \times P(RS) \times P(B) \times P(B)$

$= \frac{4}{16} \times \frac{4}{16} \times \frac{6}{16} \times \frac{6}{16}$

$= \frac{1}{4} \times \frac{1}{4} \times \frac{3}{8} \times \frac{3}{8}$

$= \frac{9}{1024}$

c) P(D, D, B or RS)

$= P(D) \times P(D) \times P(B\text{ or }RS)$

$= \frac{2}{16} \times \frac{2}{16} \times \frac{10}{16}$

$= \frac{1}{8} \times \frac{1}{8} \times \frac{5}{8}$

$= \frac{5}{512}$

Page 421 # 9 , #10, #11, #12, #13

13a) $P(5W) = P(W) \times P(W) \times P(W) \times P(W) \times P(W$

$= \frac{1}{6} \times \frac{1}{6} \times \frac{1}{6} \times \frac{1}{6} \times \frac{1}{6}$

$= \frac{1}{7776}$

$= 0.0001286$

or 0.01286%

b) The events are independent, so if you draw 5 white marbles the probability of the next marble being white is still $\frac{1}{6}$.

c) This is not the same as asking what the probability is of getting 6 white in a row .....

Page 426-427 # 5 , #10, #12, #15,

5) a) Stacy used the same number of symbols next to each category and use the same for her symbol.

5b) From her pictograph she drew the picture beside the carrots larger to draw more attention to that category but in reality candy has the most symbols which indicates it is the most popular.

5c) She made her symbols different sizes whrn she should keep them all the same size. She made sure the symbols beside the carrots were the largest trying to convince people that carrots are more popular.

10) P(Red Shirt, Brown Pants) = P(Red Shirt) x P(Brown Pants)

$= \frac{1}{4} \times \frac{2}{3}$

$= \frac{2}{12}$

$= \frac{1}{6}$

= 0.16666 = 16.6%

12) a) p(green) = 1/3 = 0.33= 33%

12b) P(green, green, green) = P(green) x P(Green) x P(Green)

= 1/3 x 1/3 x 1/3

= 1 /27

= 0.037

= 3.7%

12c) p(not green, not green, not green) = P(NG) x P(NG) x P(NG)

= 2/3 x 2/3 x 2/3

= 8/27

= 0.29

= 29%

15) a) P(M, M, M) = P(M) x P(M) x P(M)

= (1/4) x (1/4) x (1/4)

= 1/64

= 0.016

= 1.6%

15) b) P(M, A, T) = P(M) x P(A) x P(T)

= (1/4) x (1/4) x (1/4)

= 1/64

= 0.016

= 1.6%

15) c) P(A, A, H) = P(A) x P(A) x P(H)

= (1/4) x (1/4) x (1/4)

= 1/64

= 0.016

= 1.6%

15) d) P(NotA, NOTCon,A) = P(NotA) x P(NotCon) x P(A

= (3/4) x (1/4) x (1/4)

= 3/64

= 0.046

= 4.6%