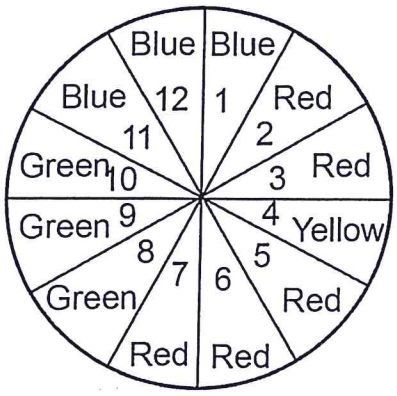
Algebra 2 Bellwork Thursday, May 28, 2015

1. In a shipment of 20 computers, 3 are defective. Three computers are randomly selected and tested. What is the probability that all three are defective if the you don't return the computer after testing it?

2. You'll spin the spinner once. Find each probability as a fraction.



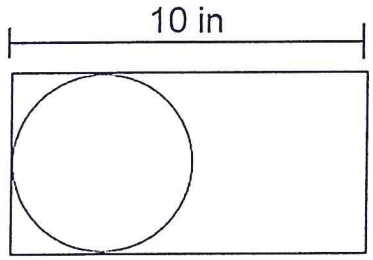
a. P(Green or Prime)=

b. P(Red or Odd)=

c. P(Green and Even)=

d. P(Multiple of 4 and odd)=

3. The area of this rectangle is 40 in^2. Find the probability that a dart randomly lands in the rectangle but not in the circle. Give the answer as a percent ot the nearest tenth.



4. In your desk drawer you have the following pens: 6 blue, 5 red, and 7 black. A student asks to borrow a pen so you randomly grab one and give it to them. A minute later another student asks for a pen and you randomly give them one. Find each probability as a fraction.

a) P(Blue and Red)=

b) P(Black and Black)=

5. You are playing fantasy football with some friends. You have to create a team by choosing from a list of 14 Quarterbacks, 20 Running Backs, and 15 Receivers. Find the number of possible fantasy teams you could create if you must pick 1 Quarterback, 3 Running Backs, and 2 Receivers.

6. In my next at bat of the baseball game there is a $\frac{2}{13}$ chance that I hit a home run and a $\frac{4}{9}$ chance that I get a base hit. Find the following probability as a fraction.

P(hit home run or get base hit)=

7. Use this set of data: $12, 16, 8, 22, 35, 16, 40, 8, 37, 12, 19, 14, 2$

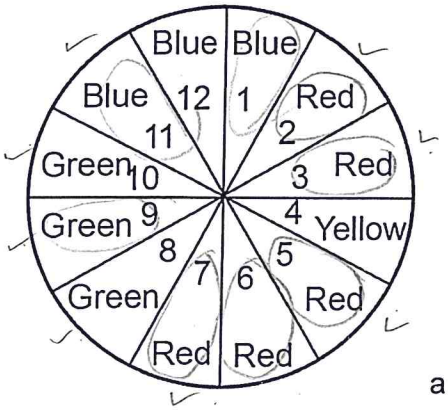
Find the Mean, Median, Mode, and Range. Round to the nearest hundredth when neccessary.

Algebra 2 Bellwork Thursday, May 28, 2015 ANSWERS

1. In a shipment of 20 computers, 3 are defective. Three computers are randomly selected and tested. What is the probability that all three are defective if the you don't return the computer after testing it?

DEPENDENT EVENTS $3/20 \cdot 2/19 \cdot 1/18 = \frac{6}{6840} = .09\%$

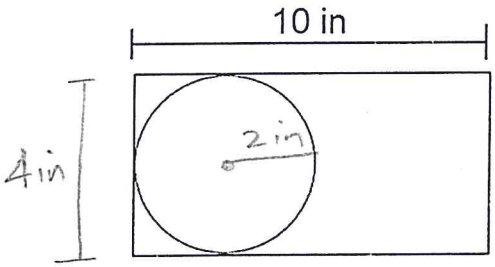
2. You'll spin the spinner once. Find each probability as a fraction.



a. P(Green or Prime)= $\frac{8}{12}$ b. P(Red or Odd)= $\frac{8}{12}$

c. P(Green and Even)= $\frac{2}{12}$ d. P(Multiple of 4 and odd)= $\frac{0}{12}$

3. The area of this rectangle is 40 in^2. Find the probability that a dart randomly lands in the rectangle but not in the circle. Give the answer as a percent ot the nearest tenth.



$prob = \frac{Rect - Circle}{Rect} = \frac{40 - 4\pi}{40} = 68.6\%$

Area of Rect $= 40 in^2$

Area of Circle $= \pi(2)^2 = 4\pi in^2$

4. In your desk drawer you have the following pens: 6 blue, 5 red, and 7 black. A student asks to borrow a pen so you randomly grab one and give it to them. A minute later another student asks for a pen and you randomly give them one. Find each probability as a fraction.

a) P(Blue and Red)= $\frac{6}{18} \cdot \frac{5}{17} = \frac{30}{306}$ DEP EVENTS

b) P(Black and Black)= $\frac{7}{18} \cdot \frac{6}{17} = \frac{42}{306}$

5. You are playing fantasy football with some friends. You have to create a team by choosing from a list of 14 Quarterbacks, 20 Running Backs, and 15 Receivers. Find the number of possible fantasy teams you could create if you must pick 1 Quarterback, 3 Running Backs, and 2 Receivers.

$\frac{14}{{}_{14}C_1} \cdot \frac{1140}{{}_{20}C_3} \cdot \frac{105}{{}_{15}C_2} = 1,675,800$

6. In my next at bat of the baseball game there is a $\frac{2}{13}$ chance that I hit a home run and a $\frac{4}{9}$ chance that I get a base hit. Find the following probability as a fraction. MUTUALLY EXCLUSIVE

P(hit home run or get base hit)=

$= \frac{2}{13} + \frac{4}{9} = \frac{2}{13} \cdot \frac{9}{9} + \frac{4}{9} \cdot \frac{13}{13} = \frac{18+52}{117} = \frac{70}{117}$

7. Use this set of data: 12, 16, 8, 22, 35, 16, 40, 8, 37, 12, 19, 14, 2

Find the Mean, Median, Mode, and Range. Round to the nearest hundredth when neccessary.

$\bar{X} = 18.54$ MODE = 8, 12, 16

Median = 16 Range = 40 − 2 = 38