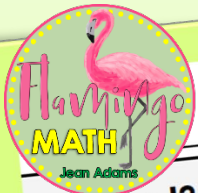


Algebra 2 Honors

Data Analysis



Period _____

Date _____

Warm-Up #1

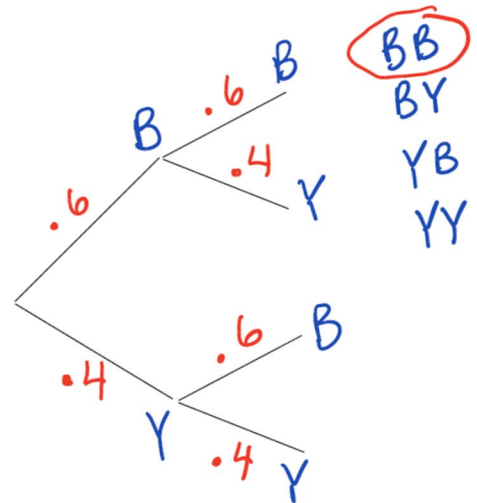
Lesson 13.4: Binomial Distributions

A bag of 10 marbles contains 6 blue marbles and 4 yellow marbles.

1. Use a tree diagram to show the possible outcome of drawing a marble, replacing it and then drawing a second marble.
 $P(\text{blue}) = \frac{3}{5}$ and $P(\text{yellow}) = \frac{2}{5}$
2. Show the outcome for each event on the node (pathway) of the diagram.
3. Find the probability that you draw two blue marbles.

$$P(2 \text{ blue}) = \frac{1}{7} (.6)^2 = 0.36$$

$\sim 36\%$



Warm-Ups

13

Completely Editable

ALGEBRA 2 CURRICULUM

Scope and Sequence

Unit I3: Data Analysis & Statistics

Lesson	Skills & Learning Objectives
[13.1] Measures of Central Tendency	☐ Calculate measures of central tendency ☐ Draw, analyze, and interpret box-and-whisker plots ☐ Find outliers
[13.2] Analyzing Data	☐ Find range, interquartile range, standard deviation of a set of data, variance, z-scores ☐ Use standard deviations to help interpret representations of real-world applications
[13.3] Working With Samples	☐ Analyze experimental data to find sample proportions ☐ Determine the margin of error ☐ Determine bias and reliability of samples and categorize types of sampling from different scenarios
[13.4] Binomial Distributions	☐ Use the Binomial Theorem to expand binomials ☐ Determine binomial probabilities ☐ Use binomial distributions to determine probabilities
[13.5] Normal Distributions	☐ Interpret data by using a normal distribution ☐ Interpret data by using the standard normal curve ☐ Calculate standard deviations when outcomes are normally distributed and analyze real-world data ☐ Make predictions based on the standard normal curve
[13.6] Confidence Intervals and Hypothesis Testing	☐ Find confidence intervals for normally distributed data ☐ Perform hypothesis tests on normally distributed data

Name _____ Date _____ Period _____

Lesson I3.I: Central Tendency

Warm-Up #1

The number of milligrams of sodium in a 12-ounce can of soda are shown below.

18	36	45	15	36	34
50	25	36	22	46	45

1. Find the mean of the data.

2. Find the median of the data.

3. Find the mode and range of the data

Name _____ Date _____ Period _____

Lesson I3.I: Central Tendency

Warm-Up #2

The number of minutes that your team members spend studying the coach/s playbook are shown below.

40	24	35	25	30	24
52	25	34	26	56	25

1. Find the mean of the data.

2. Find the median of the data.

3. Find the mode and range of the data

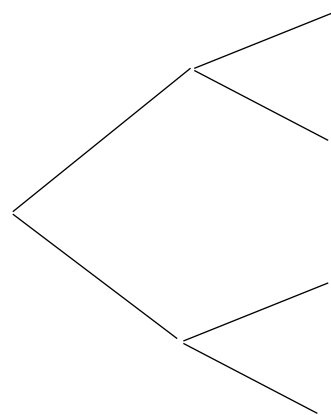
Name _____ Date _____ Period _____

Lesson I3.4: Binomial Distributions

Warm-Up #1

A bag of 10 marbles contains 6 blue marbles and 4 yellow marbles.

1. Use a tree diagram to show the possible outcome of drawing a marble, replacing it and then drawing a second marble.
 $P(\text{blue}) = \frac{3}{5}$ and $P(\text{yellow}) = \frac{2}{5}$
2. Show the outcome for each event on the node (pathway) of the diagram.
3. Find the probability that you draw two blue marbles.



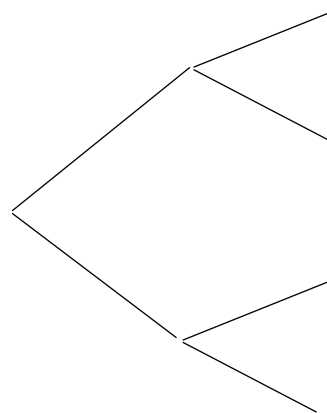
Name _____ Date _____ Period _____

Lesson I3.4 Binomial Distributions

Warm-Up #2

A bag of 12 marbles contains 4 blue marbles and 8 yellow marbles.

1. Use a tree diagram to show the possible outcome of drawing a marble, replacing it and then drawing a second marble.
 $P(\text{blue}) = \frac{1}{3}$ and $P(\text{yellow}) = \frac{2}{3}$
2. Show the outcome for each event on the node (pathway) of the diagram.
3. Find the probability that you draw two blue marbles.

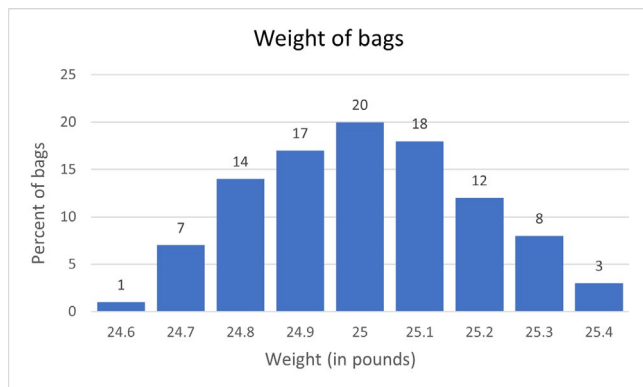


Name _____ Date _____ Period _____

Lesson I3.5: Normal Distributions

Warm-Up #1

The actual weights of 1500 bags of rice are normally distributed. The mean of the weights is 25.0 pounds, with a standard deviation of 0.2 pound.



1. What percent of the bags of rice are below the mean?

2. About what percent of bags of rice are between 24.9 and 25.1 pounds?

3. About how many total bags of rice would you expect to weigh more than 25.2 pounds?

Name _____ Date _____ Period _____

Lesson I3.5 Normal Distributions

Warm-Up #2

The actual hours spent exercising each week for a survey of 1800 high school students are normally distributed. The mean time spent exercising is 5 hours, with a standard deviation of 0.2 hour.



1. What percent of students are below the mean?

2. About what percent of students are between 4 and 6 hours of exercise?

3. About how many students would you expect to exercise for 8 or 9 hours each week?