Name: KEY Period:

Mean, Median, Mode and Range

Int 1 **Unit 10**

Find the mean, median and mode of each set of data. Round to the TENTHS. ☺

1. 78, 72, 83, 67, 84, 81, 79, 81

Mean: 78.125 ≈ 78.1

Median: 80

Mode: 81

Range: 17

2. 7.8, 9.3, 2.1, 4.5, 5.9, 2.1, 5.3, 6.3, 7.4

Mean: 5.63 ≈ 5.6

Median: 5.9

Mode: 2.1

Range: 7.2

3. 5, 8, 7, 2, 9, 7, 3, 2, 8, 10, 12, 8

Mean: 6.75 ≈ 6.8

Median: 7.5

Mode: 8

Range: 10

4. 15, 22, 27, 19, 20, 25, 24, 22, 24, 26

Mean: 22.4

Median: 23

Mode: 22 & 24

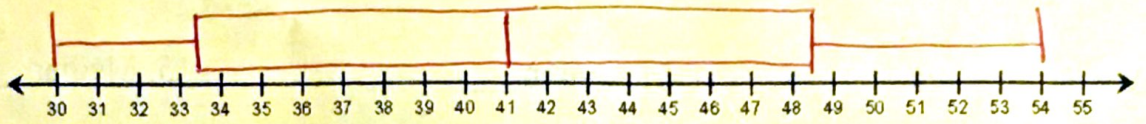
Range: 12

Name: KEY Period:

Making a Box-and-Whisker

Int 1 **Unit 10**

Use the following numbers to answer questions #1 – 6.
51, 41, 46, 30, 34, 38, 54, 39, 50, 43, 33, 31, 47

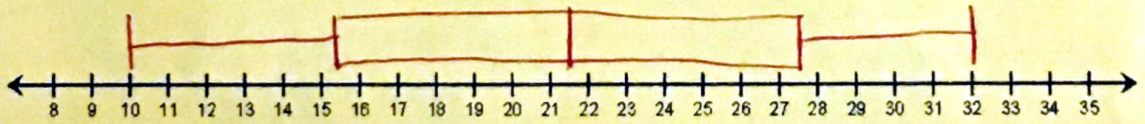


1. Minimum 30 2. Maximum 54 3. Median 41

4. 1st Quartile (lower) 33.5 5. 3rd Quartile (upper) 48.5

6. Interquartile Range 15

Use the following numbers to answer questions #7 – 12.
14, 18, 12, 10, 19, 28, 24, 17, 27, 30, 32, 25



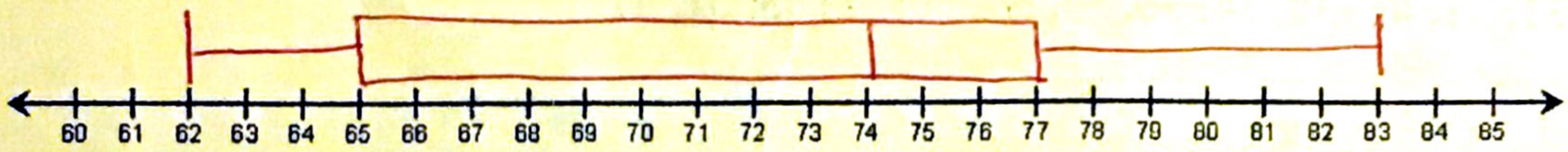
7. Minimum 10 8. Maximum 32 9. Median 21.5

10. 1st Quartile (lower) 15.5 11. 3rd Quartile (upper) 27.5

12. Interquartile Range 12

Use the following numbers to answer questions #13 – 18.

75, 65, 63, 71, 78, 83, 62, 74, 76, 70, 77



13. Minimum 62 14. Maximum 83 15. Median 74

16. 1st Quartile (lower) 65 17. 3rd Quartile (upper) 77

18. Interquartile Range 12

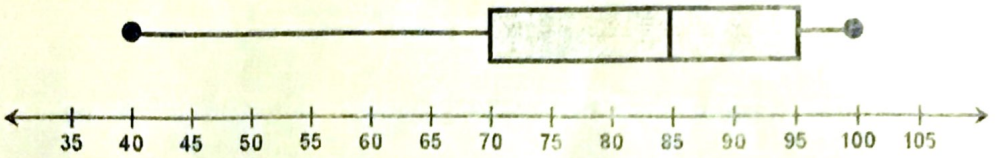
Name: KEY Period:

Reading a Box-and-Whisker

Int 1 **Unit 10**

For questions 1 – 6, refer to the box & whisker graph below which shows the test results of a math class.

Test Scores for a Math Class



100 1. What was the highest score on the test?

75% 2. What percent of the class scored above a 70?

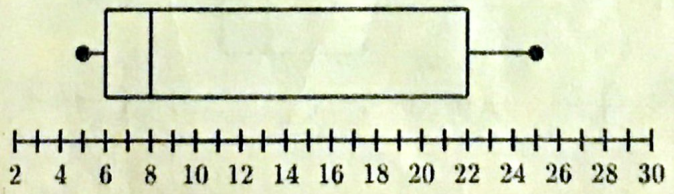
85 3. What was the median score on the test?

25% 4. What percent of the class scored between 85 & 95?

40 5. What was the lowest score on the test?

For questions 6 – 10, refer to the box & whisker graph below which shows the amount of cookies eaten during a cookie eating contest during lunch.

Number of cookies eaten by each contestant



25 6. What was the largest amount of cookies eaten during the contest?

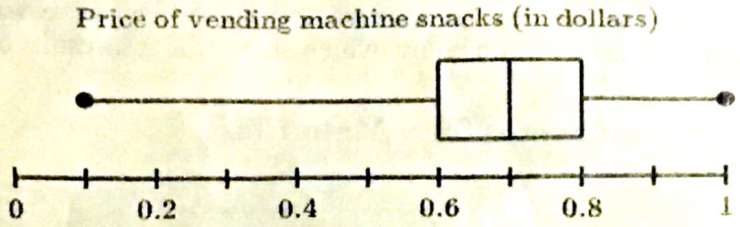
50% 7. What percent of contestants ate more than 8 cookies?

22 8. What number represents the 3rd Quartile (upper)?

10 9. If 20 contestants participated in the contest, how many contestants ate less than 8 cookies?

5 10. What was the least amount of cookies eaten during the contest?

For questions 11 – 15, refer to the box & whisker graph below which shows the amount items cost in a vending machine.



$1.00 11. How much was the most expensive item in the vending machine?

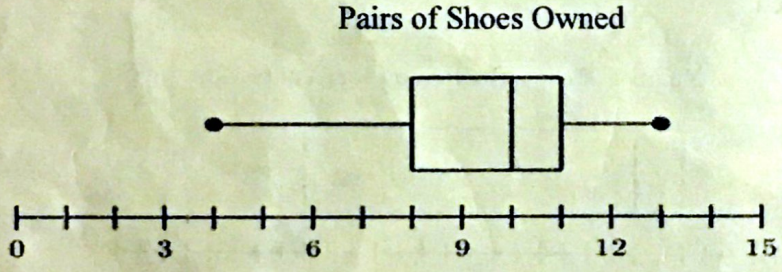
75% 12. What percent of items were over $0.60?

$0.10 13. What was the price of the least expensive item in the vending machine?

50% 14. What percent of the items are between $0.60 and $0.80?

$0.90 15. What is the range of prices in the vending machine?

For questions 16 – 20, refer to the box & whisker graph below. I surveyed my friends and asked how many pairs of shoes they own. The box-and-whisker below shows the results of the data I collected.



4 16. What was the lowest number of pairs of shoes owned?

75% 17. What percent of my friends own less than 11 pairs of shoes?

8 18. What is the value of the 1st Quartile (lower)?

13 19. What was the largest amount of shoes owned?

25% 20. What percent of my friends own between 4 and 8 pairs of shoes?

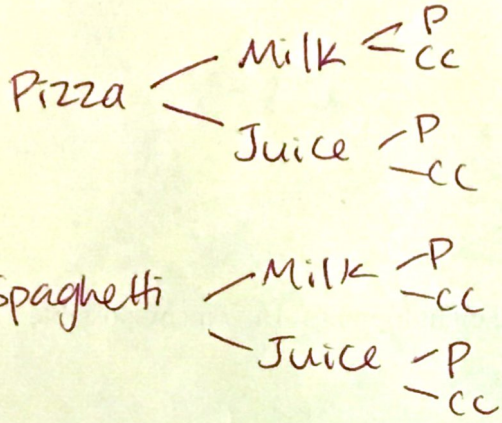
Name: KEY Period:

Tree Diagrams

Int 1 Unit 9

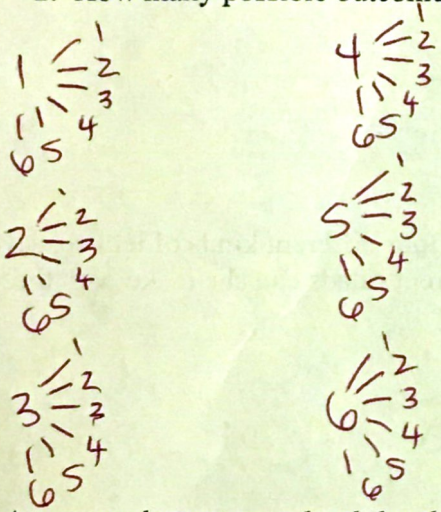
Draw a TREE DIAGRAM for the following situations to show the possible outcomes.

1. At lunch, you have the choice of pizza or spaghetti; a choice of milk or juice to drink; a choice of pudding or carrot cake for dessert. How many possible outcomes are there?



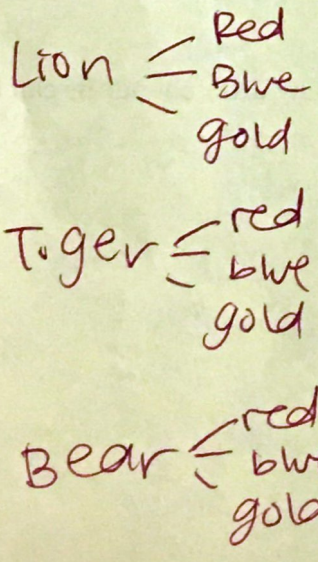
8 outcomes

2. How many possible outcomes are there if I spin the spinner twice?



36 outcomes

3. At a new elementary school the choices for the school mascot are a lion, a bear or a tiger; school color choices are red, blue and gold. How many possible outcomes are there?



9 outcomes

Name: Period:

Fundamental Counting Principle

Int 1 **Unit 9**

Use the FUNDAMENTAL COUNTING PRINCIPLE for the following situations to show the possible outcomes.

1. Sarah was going out with friends for her birthday. For dinner she will choose between Zupas, Chick-Fil-A, and Habit Burger; for an activity she will choose between bowling, a movie and roller skating; for dessert she will choose between Rita's, Coldstone or JCW's. How many outcomes are there for Sarah's birthday celebration?

27 outcomes

2. Pizza Hut offers four different sizes of pizza, two types of crust and eight toppings. How many possible combinations of pizza are there?

64 outcomes

3. The Paradise Bakery chef is making some new salads. She has four different kinds of lettuce, seven different toppings and five different dressings. How many different salads can she make with these items?

140 outcomes

4. Sebastian has four shirts, three pairs of pants and five pairs of shoes. How many different outfits can be made from these items?

60 outcomes

Name: KEY Period:

Simple Probability

Int 1 Unit 9

There are 14 marbles in a jar. There are 6 green, 3 red, 1 blue, and 4 purple marbles. Find the fraction, decimal and percent of each probability.

1. P(green) $\frac{6}{14}=\frac{3}{7}$, .43, 43%
2. P(red or blue) $\frac{4}{14}=\frac{2}{7}$, .29, 29% (3 + 1 = 4)
3. P(purple) $\frac{4}{14}=\frac{2}{7}$, .29, 29%
4. P(green or blue) $\frac{7}{14}=\frac{1}{2}$, .5, 50% (6 + 1 = 7)

A shuffled deck of 24 cards is placed face-down on the table. It contains 8 hearts, 6 diamonds, 4 clubs and 6 spades. Find the fraction, decimal and percent of each probability.

5. P(diamond) $\frac{6}{24}=\frac{1}{4}$, .25, 25%
6. P(heart or diamond) $\frac{14}{24}=\frac{7}{12}$, .58, 58% (8 + 6 = 14)
7. P(spade) $\frac{6}{24}=\frac{1}{4}$, .25, 25%
8. P(club or spade) $\frac{10}{24}=\frac{5}{12}$, .42, 42% (4 + 6 = 10)

Alex has a jar of coins. He has 6 quarters, 7 dimes, 5 nickels and 12 pennies. Find the fraction, decimal and percent of each probability.

9. P(quarter or nickel) $\frac{11}{30}$, .37, 37% (6 + 5 = 11)
10. P(penny) $\frac{12}{30}=\frac{2}{5}$, .4, 40%
11. P(penny or dime) $\frac{19}{30}$, .63, 63% (12 + 7 = 19)
12. P(quarter) $\frac{6}{30}=\frac{1}{5}$, .2, 20%

Name: KEY Period:

Compound Probability

Int 1 Unit 9

There are 14 marbles in a jar. There are 6 green, 3 red, 1 blue, and 4 purple marbles. A marble is taken out and is REPLACED.

1. P(red and red) $\frac{9}{196}$
2. P(blue and purple) $\frac{1}{49}$
3. P(blue, green, and red) $\frac{9}{1372}$
4. P(green, green and purple) $\frac{18}{343}$

There are 14 marbles in a jar. There are 6 green, 3 red, 1 blue, and 4 purple marbles. A marble is taken out and is NOT REPLACED.

5. P(red, blue and red) $\frac{1}{364}$
6. P(blue and green) $\frac{3}{91}$
7. P(green and purple) $\frac{12}{91}$
8. P(red, purple, and purple) $\frac{3}{182}$

A shuffled deck of 22 cards is placed face-down on the table. It contains 8 hearts, 3 diamonds, 4 clubs and 7 spades. A card is selected and REPLACED before another card is drawn.

9. P(heart, diamond and club) $\frac{12}{1331}$
10. P(spade and heart) $\frac{14}{121}$
11. P(a diamond twice) $\frac{9}{484}$
12. P(heart, heart and spade) $\frac{56}{1331}$

A shuffled deck of 22 cards is placed face-down on the table. It contains 8 hearts, 3 diamonds, 4 clubs and 7 spades. A card is selected and NOT REPLACED before another card is drawn.

13. P(club and heart) $\frac{16}{231}$
14. P(a diamond twice) $\frac{1}{77}$
15. P(club, club and spade) $\frac{1}{110}$
16. P(diamond, club and heart) $\frac{4}{385}$