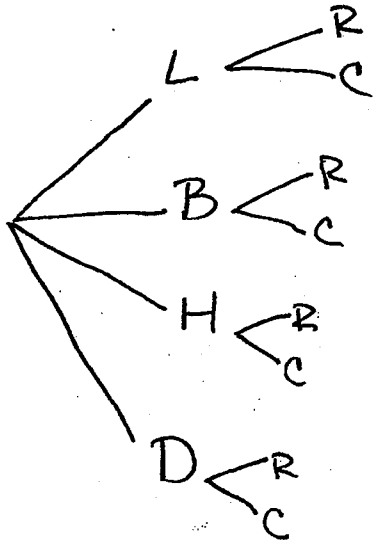
Name Answer Key Date _____

Lesson #93 - Independent Events

Do Now: **Directions:** Use a tree diagram to find the sample space and the total number of possible outcomes.

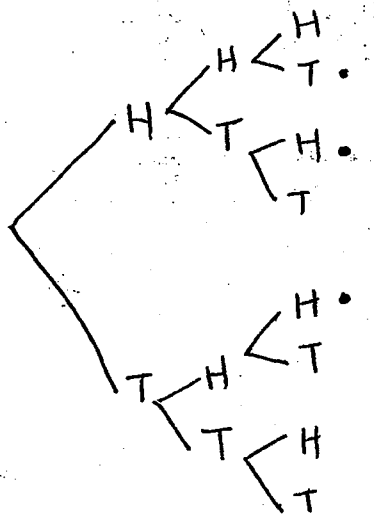
1)

	New School Mascot
Type:	Lion, Bear, Hawk, Dragon
Style:	Realistic, Cartoon



8 possible outcomes

2) You flip three nickels. What is the probability of flipping two heads and one tails?

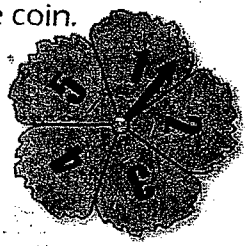


8 possible outcomes

$\frac{3}{8}$

Compound events may be independent events or dependent events. Events are independent events if the occurrence of one event does not affect the likelihood that the other event(s) will occur.

Directions: Find the following probabilities when you spin the spinner and flip the coin.



1) What is the probability of spinning a prime number and flipping tails?

$\frac{3}{5} \cdot \frac{1}{2} = \frac{3}{10}$

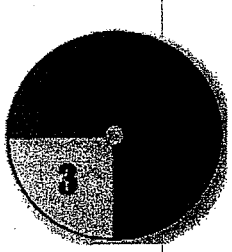
2) What is the probability of spinning a multiple of 2 and flipping heads?

$\frac{2}{5} \cdot \frac{1}{2} = \frac{2}{10}$

3) What is the probability of spinning a number less than 3 and flipping heads?

$\frac{2}{5} \cdot \frac{1}{2} = \frac{2}{10}$

Directions: You spin the spinner and flip a coin. Find the probability of the compound events.



4) Spinning a 3 and flipping heads

$\frac{1}{4} \cdot \frac{1}{2} = \frac{1}{8}$

5) Spinning an even number and flipping tails

$\frac{2}{4} \cdot \frac{1}{2} = \frac{2}{8}$

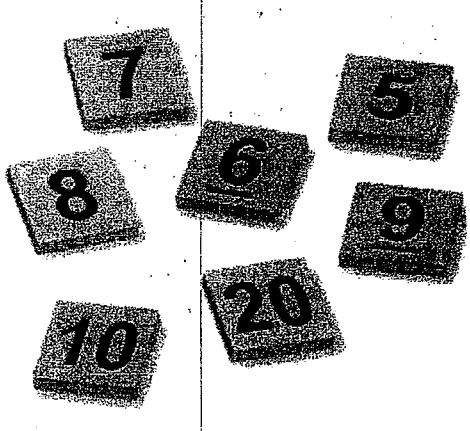
6) Spinning a number greater than 1 and flipping tails

$\frac{3}{4} \cdot \frac{1}{2} = \frac{3}{8}$

7) Not spinning a 2 and flipping heads

$\frac{3}{4} \cdot \frac{1}{2} = \frac{3}{8}$

Directions: Use the tiles shown to answer the following questions.



8) How many tiles are there? 7

9) What is the probability of choosing a five? $\frac{1}{7}$

10) After choosing a five, you put that tile back in.
How many tiles are there now? 7

11) Did the total possible outcomes change? NO

12) What is the probability of now choosing a 6? $\frac{1}{7}$

You randomly choose one of the tiles. You replace the first tile, you choose a second tile. Find the probability of the compound event.

13) Choosing a 5 and then a 6

$\frac{1}{7} \cdot \frac{1}{7} = \frac{1}{49}$

14) Choosing an odd number and then a 20

$\frac{3}{7} \cdot \frac{1}{7} = \frac{3}{49}$

15) Choosing a number less than 7 and then a multiple of 4

$\frac{2}{7} \cdot \frac{2}{7} = \frac{4}{49}$

16) Choosing two even numbers

$\frac{4}{7} \cdot \frac{4}{7} = \frac{16}{49}$