

Probability Worksheet 4
 Experimental and Theoretical Probability

Name _____

Per ____ Date _____

Amanda used a standard deck of 52 cards and selected a card at random. She recorded the suit of the card she picked, and then replaced the card. The results are in the table below.

Diamonds	
Hearts	
Spades	
Clubs	

- Based on her results, what is the experimental probability of selecting a heart?
- What is the theoretical probability of selecting a heart?
- Based on her results, what is the experimental probability of selecting a diamond or a spade?
- What is the theoretical probability of selecting a diamond or a spade?
- Compare these results, and describe your findings.
- Dale conducted a survey of the students in his classes to observe the distribution of eye color. The table shows the results of his survey.

Eye color	Blue	Brown	Green	Hazel
Number	12	58	2	8

- Find the experimental probability distribution for each eye color.

$P(\text{blue}) = \underline{\hspace{2cm}}$ $P(\text{brown}) = \underline{\hspace{2cm}}$ $P(\text{green}) = \underline{\hspace{2cm}}$ $P(\text{hazel}) = \underline{\hspace{2cm}}$

- Based on the survey, what is the experimental probability that a student in Dale's class has blue or green eyes?
- Based on the survey, what is the experimental probability that a student in Dale's class does not have green or hazel eyes?
- If the distribution of eye color in Dale's grade is similar to the distribution in his classes, about how many of the 360 students in his grade would be expected to have brown eyes?