

Unit 6 Day 1 HW

Write a sample space for each experiment.

1. A two headed coin is tossed once.
2. Two ordinary coins are tossed.
3. Three ordinary coins are tossed.
4. Slips of paper marked with the numbers 1, 2, 3, 4 and 5 are placed in a box. After mixing, two slips are drawn. What is the sample space?
5. An unprepared student takes a 3-question true false quiz in which he guesses the answers to all three questions.
6. A die is rolled and then a coin is tossed.
7. A student gives the answer to a probability problem as $\frac{6}{5}$. Explain why this answer must be incorrect.
8. If the probability of an event occurring is .857, what is the probability that the event will not occur?
9. A marble is drawn at random from a box containing 2 yellow, 4 white and 8 blue marbles. Find the sample space.
10. A card is drawn from a well-shuffled deck of 52 cards. Find the sample space. What is the sample space if a card was selected and not replaced prior to you selecting another card?
11. Mr. Lowery invites 4 relatives to a party: his mother and father, one uncle, and his sister. Give the possible seating arrangements and the sample space.
12. You are finalizing your schedule for next year. You will have the following teachers for Math, English, and PE: Castillo, Kemp, and Jones. Give all of the possible class schedules and sample space.
13. In your own words, define what sample space is. How are you able to find sample space?

Remember that $A \cap B$ means "A and B" – this is the *intersection* of both sets. Elements in the intersection have to belong to both sets. $A \cup B$ means "A or B" – this is the *union* of both sets. Elements in the union can belong to either set, or both sets. The *complement* of a set means all elements not in the set. This can be shown as either A' or A^c .

1. Use sets A and B to answer the following:

A. $A \cap B$ _____

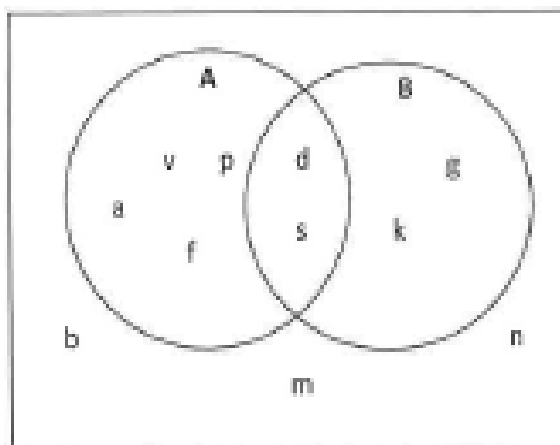
B. $A \cup B$ _____

C. A^c _____

D. B^c _____

E. $(A \cap B)^c$ _____

F. $(A \cup B)^c$ _____



2. Use sets A, B and C to answer the following:

A. $A \cap B$ _____

B. $A \cap C$ _____

C. $B \cap C$ _____

D. $B \cup C$ _____

E. $A \cup B \cup C$ _____

F. $(A \cup B \cup C)^c$ _____

G. $A \cap B \cap C$ _____

H. $(A \cap B \cap C)^c$ _____

I. $(A \cup C)^c$ _____

J. $(B \cap C)^c$ _____

