Quiz

- How to practice (*not study*)
- Cumulative
- What might be on quiz

Worksheet!

Notation note: \( A \setminus B \) can also be written as \( A - B \)

Universe Set: a set that contains every element of interest

ex: \( U = \{1, 2, 3, 4, 5, 6\} \) (if only concerned with a dice roll)

\[ U = \{A, B, D, E, H, I, K, L, M, N, O, P, R, T, U, V, W\} \]

(spelling words in Hawaiian!)

def: Given a universe set \( U \), and \( A \subseteq U \), we denote the complement of \( A \) as \( \overline{A} \), where \( \overline{A} = U \setminus A \)
We need to go back and learn how to write sentences before we get deeper into proofs.

**Definition** (also called proposition): A statement is a declarative sentence that is true or false.

**Q:** Which are statements? Discuss.

1. The majority of Middlebury students have 1 sibling.
2. The product of 2 and 5. Not a sentence (no verb!)
3. This sentence is not true. Can't be true or false
4. $2 + x = 10$. Could be true or false, but now is neither!

**A)** All  
**B)** 1, 3  
**C)** 2, 4  
**D)** 1

**Predicate** - What is it? Becomes a statement if variable gets a value.

We've seen predicates in inductive proofs.