

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

$\mathcal{U} = \{A, B, D, E, H, I, K, L, M, N, O, P, R, T, U, V, W\}$   
(spelling words in Hawaiian!)

def Given a universe set  $\mathcal{U}$ , and  $A \in \mathcal{U}$ , we denote the complement of  $A$  as  $\bar{A}$ , where  $\bar{A} = \mathcal{U} \setminus A$

We need to go back and learn how to write sentences before we get deeper into proofs

def: A statement is a declarative sentence that is true or false.   
 ← also called proposition

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