

## More Sets

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$$\textcircled{38} C = \{1, 3, 5, 7, 8, 11, 12, 15, 17, 20\}$$

$$\{ \} \cap C = \{ \} \leftarrow \text{different from } n(\{ \}) = 0$$

|  
intersection!

ex.  $A = \{1, 2, 3\}$   $B = \{4, 5, 6\}$   $C = \{1, 2\}$   
 $A \cap B = \{ \}$

$\mathcal{P}(C) = \text{set of all subsets of } C$   
 $\mathcal{P}(C) = \{ \emptyset, \{1\}, \{2\}, \{1, 2\} \}$

$$n(\mathcal{P}(C)) = 4$$

each set in this set is an element  
 count them to get  $n(\mathcal{P}(C))$

ex.  $U = \{1, 2, 3\}$

$\emptyset \subset U$ ? Is  $\emptyset$  a proper subset of  $U$ ?

yes! everything in  $\emptyset$  is in  $U$

and  $U$  has at least one element not in  $\emptyset$

$$U = \{1, 2, 3\}$$

ex.  $D = \{1, 2\}$

$$\emptyset \cup C =$$