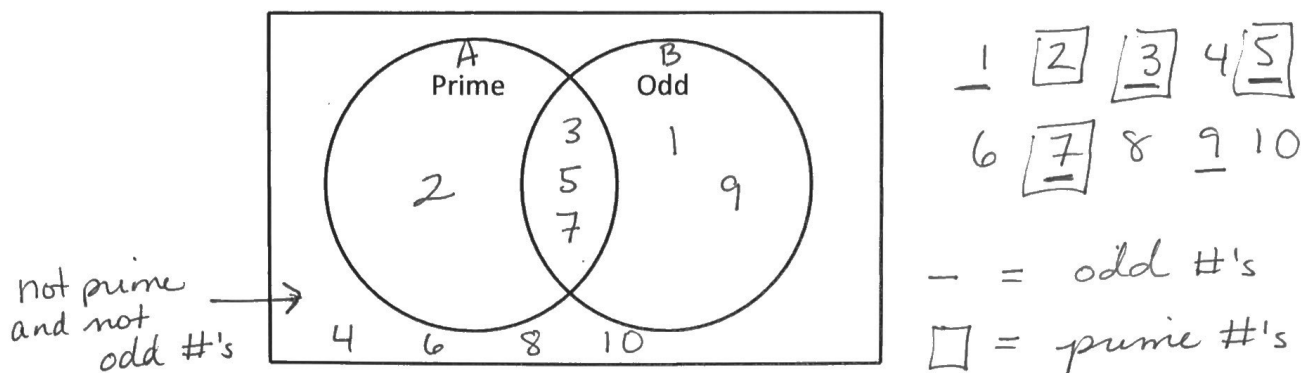


Start-up

1. Consider the set of all integers from 1 to 10. Create a Venn diagram with all 10 integers in the set.



Let set A be the outcomes of prime numbers and set B be the outcomes of odd.

a. Find $A \cap B$. What does it represent?

$\{3, 5, 7\}$ all outcomes that were prime AND odd.

b. Find $A \cup B$. What does it represent?

c. Find $(A \cup B)^c$. What does it represent?

$\{4, 6, 8, 10\}$ all outcomes not prime OR odd.

2. Felipe surveyed students at his school. He found that 78 students own a cell phone and 57 of those students own an iPad. There are 13 students that do not own a cell phone, but own an iPad. Nine students do not own either device. Construct a two-way frequency table to summarize the data.

	iPad	No iPad	Total
Cell Phone	57	21	78
No Cell phone	13	9	22
Total	70	30	100

a. $P(\text{Cell Phone}) = \frac{\text{Fav.}}{\text{total}} = \frac{78}{100} = \frac{39}{50} = \boxed{.78}$

b. $P(\text{iPad}) = \frac{70}{100} = \frac{7}{10} = \boxed{.7}$

c. $P(\text{No Cell Phone} \cap \text{iPad}) = \frac{13}{100} = \boxed{.13}$

d. $P(\text{Cell Phone} \cup \text{iPad})$

* $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$
 $P(\text{Cell Phone}) + P(\text{iPad}) - (\text{Cell and iPad})$
 $\frac{78 + 70 - 57}{100} = \frac{91}{100} = \boxed{.91}$