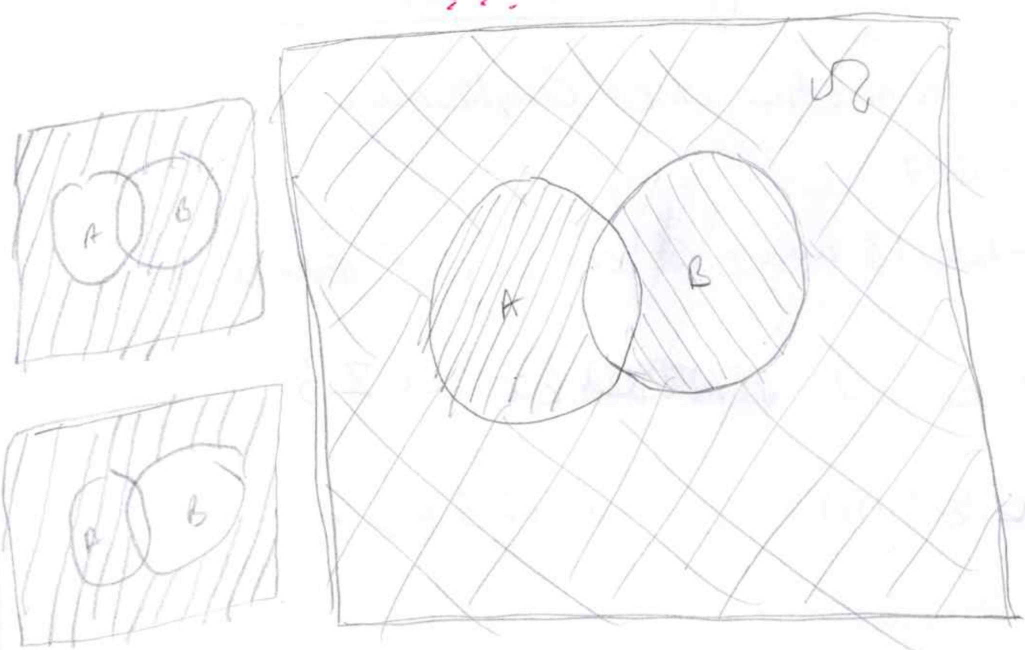
b) $A' \cap B'$

???



~~A' excludes elements in the universal set that are in A but will include B and B'~~

A' includes everything else but A

B' includes everything else but B

$\mathcal{U}$ = includes everything

$\therefore$ A' will include B' and B

3) From the random experiment of rolling a die find the union, intersection and complement of the following events:

$E1 = \{\text{odd numbers} \geq 3\}$ and $E2 = \{\text{even number} < 4\}$

$\mathcal{U} = \{1, 2, 3, 4, 5, 6\}$

<u>union</u>

$\rightarrow \{\text{odd number} \geq 3\} \cup \{\text{even number} < 4\} = \{2, 3, 5\}$

$\{3, 5\} \cup \{2\} = \{2, 3, 5\}$ ✓

<u>Intersection</u>

$\rightarrow \{3, 5\} \cap \{2\} = \{\emptyset\}$ ✓ check with Amelia

<u>Complement</u>

$\rightarrow \{3, 5\}' = \{1, 2, 4, 6\}$ ✓

$\{2\}' = \{1, 3, 4, 5, 6\}$ ✓