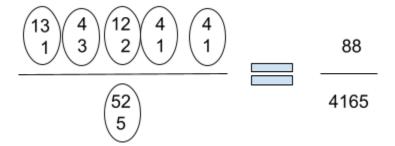
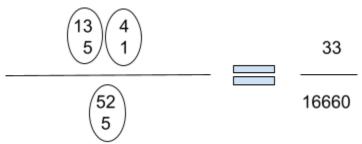
# **Question 7**:

### Exercise 6.1.5:(b-d)

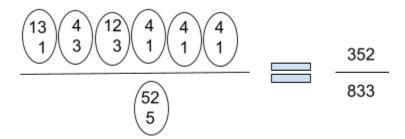
b.



C.



d.



#### Exercise 6.2.4:(a-d)

a.

$$1 - \frac{ \begin{pmatrix} 39 \\ 5 \end{pmatrix} }{ \begin{pmatrix} 52 \\ 5 \end{pmatrix} } = 0.77846$$

b.

$$1 - \frac{{13 \choose 5} 4^5}{{52 \choose 5}} = 0.4929$$

C.

d.

$$1 - \frac{\binom{26}{5}}{\binom{52}{5}}$$

# **Question 8**:

Exercise 6.3.2:(a-e)

a.

Solution:

$$p(A) = \frac{6!}{7!} = \frac{1}{7}$$

$$p(B) = \frac{\frac{7!}{2!}}{7!} = \frac{1}{2}$$

$$p(C) = \frac{5!}{7!} = \frac{1}{42}$$

b.

Solution:

$$\frac{2!*3!}{5!} = \frac{1}{10}$$

C.

Solution:

$$\frac{\frac{5!}{2!}}{5!} = \frac{1}{2}$$

d.

Solution:

$$\frac{(5 choose 3) * 3! * 3!}{\frac{7!}{2!}} = \frac{1}{7}$$

e.

Solution:

A and B are independent.

#### Exercise 6.3.6:(b,c)

b.

Solution:

$$\left(\frac{1}{3}\right)^5 * \left(\frac{2}{3}\right)^5$$

C.

Solution:

$$(\frac{1}{3}) * (\frac{2}{3})^9$$

#### Exercise 6.4.2:(a)



Solution:

## **Question 9**:

Exercise 6.5.2:(a,b)

a.