Probability Formulas Notes

Probability of an event E

$$P(E) = \frac{n(E)}{n(S)}$$

Complement Rule for Probability

$$P(non\ E) = 1 - P(E)$$

Addition Rule for Probability

$$P(E\ or\ F) = P(E) + P(F) - P(E\ and\ F)$$

Bag of Marbles

Color	Number
Red	6
White	4
Blue	8
Green	2
Yellow	1
Black	5

If you reach in the bag, what's the probability of selecting:

Approximate to the Thousandths

1. A red marble?
2. White marble?
3. Yellow marble?
4. Non-red marble?
5. Non-white marble?
6. Non-yellow marble?

Covid-19 Mortality Table (One Day Total)

Age (years)	number
18 to 40	1
41 to 65	8
65 or older	31
Total	40

If you select a person at random, what's the probability the person is: **Approximate to the Thousandths**

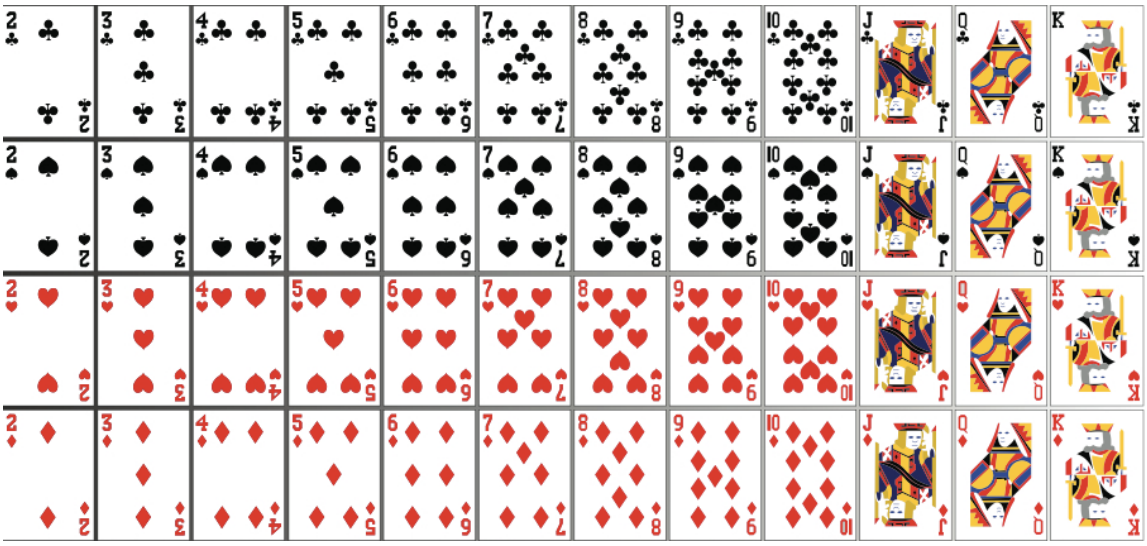
7. 18 to 40 years?
8. 41 to 65 years?
9. 65 or older?
10. Not 18 to 40 years?
11. Not 41 to 65 years?
12. Not 65 or older?
13. Which age group is more likely to die from Covid-19?
14. Which age group is less likely to die from Covid-19?

Roll a Die

If you roll a die, what's the probability of rolling:
Approximate your answer to the nearest thousandths.

15. 2?
16. 5?
17. 2 or 5?
18. Odd number or 2?
19. Non 2?
20. Non 5?
21. Odd number or a number less than 2?

Standard Deck Assume the Ace is High



If you select a card from a standard deck, what's the probability of selecting:

Approximate your answer to the nearest thousandths.

22. Queen?
23. Non-queen?
24. Heart?
25. Non heart?
26. Queen of hearts?
27. Queen or Heart?
28. Queen and Jack?
29. Queen or Jack?
30. Red Queen?
31. Non red Queen?
32. Queen or red card?