

Why Thanks for the Complement!

Find the following probabilities and circle each description that is correct.
(You may circle more than one 😊)

For each of the following consider a standard deck of cards.

1. $P(\text{King or Diamond}) =$ _____

Mutually Exclusive

Complementary

Neither

2. $P(\text{Red or Black}) =$ _____

Mutually Exclusive

Complementary

Neither

3. $P(4 \text{ or } 7) =$ _____

Mutually Exclusive

Complementary

Neither

4. $P(\text{Diamond or Spade}) =$ _____

Mutually Exclusive

Complementary

Neither

5. $P(\text{Ace or Red Card}) =$ _____

Mutually Exclusive

Complementary

Neither

6. $P(\text{Red or NOT a Red}) =$ _____

Mutually Exclusive

Complementary

Neither

For 7-10, a fair twenty-sided die is rolled (numbered 1-20)

7. $P(14 \text{ or a Prime Number}) =$ _____

Mutually Exclusive

Complementary

Neither

8. $P(\text{Divisible by two or NOT divisible by two}) =$ _____

Mutually Exclusive

Complementary

Neither

9. $P(3 \text{ or } 15) =$ _____

Mutually Exclusive

Complementary

Neither

10. $P(\text{Even number or multiple of } 3) =$ _____

Mutually Exclusive

Complementary

Neither

11. $P(\text{that it is snowing or NOT snowing}) =$ _____

Mutually Exclusive

Complementary

Neither

12. Create a situation in which the probability of two events occurring is mutually exclusive and complementary.

13. Create a situation in which the probability of two events occurring is mutually exclusive but **not** complementary.