

Set U , the universal set, for these questions is the set of natural numbers less than 13.

Set A is the set of the factors of 12. Set B is the set of even natural numbers less than 13.

Set C is the set of odd natural numbers less than 12. Set D is the set of even natural numbers less than 7.

1. What is set A ?

2. What is set B ?

3. What is set C ?

4. What is set D ?

5. Is $D \subset A$? Explain why or why not.

6. Is $B \subset A$? Explain why or why not.

7. What is $A \cap B$?

8. What is $A \cap D$?

9. What is $A \cup B$?

10. What is $A \cup C$?

11. What is A^c ?

12. What is B^c ?

You have a set of 10 cards numbered from 1 to 10. You choose a card at random. Event A is choosing a number less than 7. Event B is choosing an odd number.

13. $P(A) =$

14. $P(B) =$

15. $P(A \cup B) =$

16. $P(A \cap B) =$

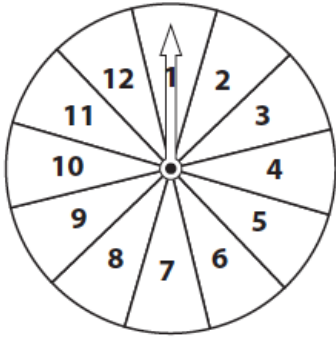
17. $P(A^c) =$

18. $P(B^c) =$

Use the complement of the event to find the probability.

19. You roll a 6-sided die. What is the probability that you do not roll a 2?

20. You spin the spinner shown. The spinner is divided into 12 congruent parts. What is the probability of not spinning a 3?



21. A bag contains 2 red, 5 blue, and 3 green marbles. What is the probability of not selecting a red marble?

22. Cards numbered from 1 to 12 are placed in a bag. What is the probability of not choosing a number less than 5?

23. Slips of paper numbered 1 to 20 are folded in half and placed into a hat, and then a slip of paper is drawn at random. What is the probability the slip drawn has a number that is not a multiple of 4 or 5?