

Name: _____ Date: _____

Are these games fair or unfair?

1. Player A wins if 1, 3, or 5 is rolled. _____
Player B wins if 2, 4, or 6 is rolled.
2. _____
Player A wins if numbers < 4 are rolled. _____
Player B wins if numbers > 4 are rolled.
3. Player A wins if prime numbers are rolled. _____
Player B wins if non prime numbers are rolled.
4. Player A wins if 4, 5, or 6 is rolled. _____
Player B wins if 1, 2, or 3 is rolled.
5. There are 8 pink counters and 9 yellow counters in a bag. Henry wins if a pink counter is pulled out. Is the game fair or unfair? _____
6. Tim and Annie are playing a game with a bag containing 6 brown, 5 blue, and 4 green marbles. Tim wins the game if he draws a brown marble. Otherwise Annie wins. Is the game fair or unfair? _____
7. There are 3 purple pencils and 4 pink pencils in a jar. Josh draws 2 pencils from the jar. If 2 pencils are of different colors then he wins the game. Is the game fair or unfair?

8. Chris tosses a coin. If he gets a head, then he wins the game. Otherwise Lydia wins. Is the game fair or unfair? _____

Deck of Cards - Use a deck of cards to help find the probability .

1. $P(\text{a 3 and red})$

2. $P(\text{not a heart})$

3. $P(\text{a black 8})$

4. $P(\text{a heart or a 5})$

5. $P(\text{heart})$

6. $P(\text{odd})$

7. $P(\text{face})$

8. $P(\text{a jack and a black})$

9. $P(\text{a club or a 3})$

10. $P(\text{a red ace})$