

Name _____

Date _____

Using Probabilities to Make Fair Decisions - Independent Practice Worksheet

Complete all the problems.

1. Brett and Sofia are playing with playing cards. They decide to shuffle a deck of playing cards. After a shuffle they choose a single card. If that card is of an Ace or a King they win 2 points. If that card is of a Jack or a Queen they win 3 points. If that card is of any other number, they lose 1 point. Is this game fair?

2. Aidan and Anna both are participating in a competition to see who can eat more bananas. Aidan eats 6 bananas and Anna eats 8 bananas. The judgment committee announces the first prize is awarded to Anna. Is this judgment fair?



3. Keira and her 6 friends are contributing money to purchase a music system that is worth \$7,000. For this they all contribute \$1,500. Is this fair?

4. Eliza and Alisha are the two baseball captains. They roll a die and decide that if the die lands with an even number, Eliza's team will bat first. Otherwise Alisha's team will bat first. Is this method fair?

5. Smith and his cousins are rolling dice. They decide that if they roll a 1 or 2 then they will win 3 points. If the number is 3 or 4 then they win 4 points. If they roll a 5 or 6 they win 5 points. Is this game fair?



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6. Luca is paying \$7 for half dozen tomatoes which are worth \$10 for one dozen. Is Luca paying a fair price?

7. Maria and Mary are playing with dice. They roll one die. If the die lands on the number 2 then they win 7 candies. If the die lands on the number 5 then they win 4 candies. If the die lands on any other number, they lose 2 candies. Is this game fair?

8. Diana, Rachel and Joseph are playing with alphabet blocks. They have one minute to make 15 different letter combinations with the blocks. If they make 15 letter combinations, then they win 10 chocolates. If they make 14 letter combinations then they win 7 chocolates, if they make 13 letter combinations, they win 4 chocolates. If they make less than 13 letter combinations, they lose 3 chocolates. Is this game fair?

9. Ileana purchased a blender which was worth \$2,000. She paid \$2,500. The shopkeeper returned \$500. Is this a fair amount of money returned by the shopkeeper?

