Name: _____ Date: _____

Change the bag or spinner

Write the answer in the box. Some answers have a pick list.



1 A bag has 2 red and 5 blue counters. Add the fewest red counters to make red more likely than blue. How many do you add? Explain.

💡 Hint: Try one change at a time and count again after each one.

Add 4 red, making 6 red and 5 blue. Adding only 3 makes the counts equal

2 A bag has 6 red and 3 blue counters. Remove the fewest red counters to make blue more likely than red. How many do you remove? Explain.

💡 Hint: Try one change at a time and count again after each one.

Remove 4 red, leaving 2 red and 3 blue. Removing 3 only makes the counts equal

3 A bag has 3 red and 5 blue counters. Change the colour of one counter to make red and blue equally likely. Which colour must change? Explain.

💡 Hint: Try one change at a time and count again after each one.

Change one blue counter to red, giving 4 red and 4 blue

4 A spinner has 4 equal sections: 3 blue and 1 red. Change the fewest sections so red and blue are equally likely. What do you change? Explain.

💡 Hint: Try one change at a time and count again after each one.

Change 1 blue section to red. Then there are 2 sections of each colour

5 A bag has 2 red, 2 blue, and 2 green counters. Add 2 green counters. Which colour is most likely now? Explain.

💡 Hint: Try one change at a time and count again after each one.

Green. There are now 4 green, 2 red, and 2 blue

6 A bag has 3 red and 3 blue counters. First add 2 red counters. Then remove 1 blue counter. How does each change affect the chance of red? Explain.

💡 Hint: Try one change at a time and count again after each one.

Adding red increases the chance of red, from 3 out of 6 to 5 out of 8. Removing blue increases it again to 5 out of 7

7 A bag has 2 red and 4 blue counters. You may add 2 counters of one colour. Which colour should you add to make the chance of red as high as possible? Describe the new chances.

💡 Hint: Try one change at a time and count again after each one.

Add red. There are 4 red and 4 blue, so the colours are equally likely. Adding blue would make red less likely