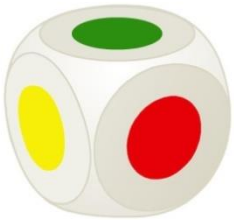
Name: _____ Class: _____ Date: _____

What is certain? What is possible? What is impossible?

Work assignments

1. **Roll a die with different colors.**

   For each roll, write down your result by marking an "X" in the table.
   Then add up the number of X's for each color and write the totals in the table.
   Compare your result with your classmate's result.



Roll no.	1	2	3	4	5	6	7	8	9	10	Total
Red											
Yellow											
Blue											
Green											
Purple											
Black											

2. **Toss a coin.**

   For each toss, write down your result by marking an "X" in the table.
   Then add up the number of X's for heads and the number of X's for tails and write the totals in the table.
   Compare your result with your classmate's result.

Toss no.	1	2	3	4	5	6	7	8	9	10	Total
Heads											
Tails											

Name: _____ Class: _____ Date: _____

3. **Draw a bead.**

Draw a bead from a pouch with four red, four black, and four yellow beads.
Then toss the bead back into the pouch.
For each draw, write down your result by marking an "X" in the table.
Then add up the number of X's for each color and write the totals in the table.
Compare your result with your classmate's result.

Draw no.	1	2	3	4	5	6	7	8	9	10	Total
Red											
Black											
Yellow											

Consider the following:

1. What would a die have to look like to make it certain you will roll a 6?

_____

2. What is more likely, to roll a 1 with a die or to get a tails when you toss a coin?

_____

3. Steve tosses a coin several times. What is more likely: HHHHHHHHH or HTHHTTHTH (H = heads, T = tails)?

_____

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4. Max and Laura are playing a game: A lottery drum holds 49 tickets with the numbers 1 to 49. Max wins if an even number is drawn, and Laura wins for an odd number. Is this game fair?

5. A die is rolled. What is the probability that the rolled number will be even?

6. **For fast students:** How likely is it that the first number drawn in a lottery will be a 7?

7. **For fast students:** What is more likely: Rolling a double with two dice or rolling a triple with three dice?