Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Investigation 12: **Chances of Getting the Flu?**

**Exit Ticket**

Your math teacher owns 10 ties and randomly chooses a tie to wear to work each school day (not much fashion sense). You notice that he sometimes wears the same tie more than once during the week. You wonder if this is likely to happen often so you decide that you would like to find an estimate for the probability that he wears the same tie more than once in a five-day workweek. To find this estimate you design and conduct a simulation.

1. Describe the simple event.
2. Describe a model that would be appropriate to use for the simple event.

1. Describe a trial and describe what you would record for each trial.
2. Using the results below what is an estimate for the probability that he wears the same tie more than once in a five-day workweek?

Below is a table showing results for this simulation.

|  |  |  |  |
| --- | --- | --- | --- |
| Trial Number | Wears same tie more than once (Y/N) | Trial Number | Wears same tie more than once (Y/N) |
| 1 | Y | 15 | N |
| 2 | N | 16 | Y |
| 3 | N | 17 | Y |
| 4 | N | 18 | Y |
| 5 | N | 19 | Y |
| 6 | Y | 20 | Y |
| 7 | Y | 21 | Y |
| 8 | N | 22 | N |
| 9 | N | 23 | Y |
| 10 | Y | 24 | N |
| 11 | Y | 25 | Y |
| 12 | Y | 26 | N |
| 13 | Y | 27 | N |
| 14 | Y | 28 | Y |