

# Experimental Probability – 1

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

Today, we are going to start with an activity that will review properties of triangles and also experimental probability. In groups of 3, we will be rolling number cubes and recording the numbers. We will then use the numbers as side measures of a triangle. The largest number representing the longest side of the triangle and the other two being B and A in descending order. You will record each set of rolls on the table that you will find on the back of this sheet. Your team will do this 30 times and record all your rolls.

*Remember that to make a triangle, the sum of the two smaller sides must be greater than the length of the longest side.*

Please follow all the steps:

1. Sit at one desk with the three members sitting down.
2. You will be given dice to roll. Each member of the team gets a number cube and rolls it.
3. The three rolls are compared and ordered from largest to smallest. The team then fills in the numbers in the correct spot on the page on the back of this page.
4. Using your understanding of triangles (see above), Indicate if the numbers create a triangle or not\* and then, if they do, classify the triangle\*\*.
5. Record what type of triangle was formed if one was.
6. Repeat 4-6 29 more times to fill in your sheet.

\* The sum of the two shorter sides must be greater than the longest to create a triangle. If the sides do not create a triangle, you do not have to classify it.

\*\* Remember that triangles are classified according to the sides – if the sides are all the same, it is an **equilateral triangle**; if the sides are all different, it is a **scalene triangle** and if there are two sides that are the same, it is an **isosceles triangle**. (A **right triangle** would have sides 3, 4, 5 to create a 90 degree triangle that is also a scalene triangle)

|    | Side A | Side B | Side C | Triangle?<br>Yes/No | Classification of triangle if Yes |
|----|--------|--------|--------|---------------------|-----------------------------------|
| 1  |        |        |        |                     |                                   |
| 2  |        |        |        |                     |                                   |
| 3  |        |        |        |                     |                                   |
| 4  |        |        |        |                     |                                   |
| 5  |        |        |        |                     |                                   |
| 6  |        |        |        |                     |                                   |
| 7  |        |        |        |                     |                                   |
| 8  |        |        |        |                     |                                   |
| 9  |        |        |        |                     |                                   |
| 10 |        |        |        |                     |                                   |
| 11 |        |        |        |                     |                                   |
| 12 |        |        |        |                     |                                   |
| 13 |        |        |        |                     |                                   |
| 14 |        |        |        |                     |                                   |
| 15 |        |        |        |                     |                                   |
| 16 |        |        |        |                     |                                   |
| 17 |        |        |        |                     |                                   |
| 18 |        |        |        |                     |                                   |
| 19 |        |        |        |                     |                                   |
| 20 |        |        |        |                     |                                   |
| 21 |        |        |        |                     |                                   |
| 22 |        |        |        |                     |                                   |
| 23 |        |        |        |                     |                                   |
| 24 |        |        |        |                     |                                   |
| 25 |        |        |        |                     |                                   |
| 26 |        |        |        |                     |                                   |
| 27 |        |        |        |                     |                                   |
| 28 |        |        |        |                     |                                   |
| 29 |        |        |        |                     |                                   |
| 30 |        |        |        |                     |                                   |

So, what was the experimental probability of the following:

No triangle:

Scalene Triangle:

Right Triangle (also a scalene triangle):

Isosceles Triangle:

Equilateral Triangle: