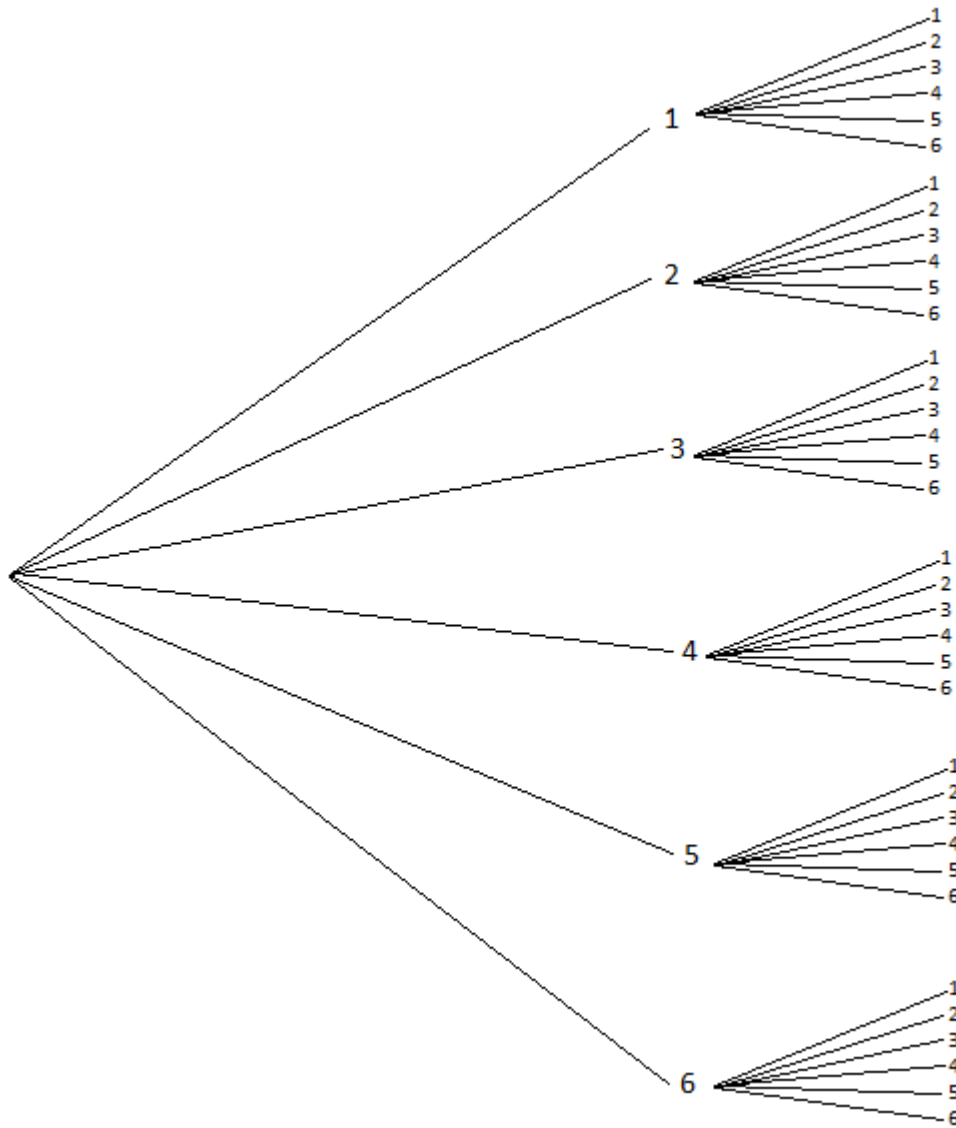


Grade 7/8 Math Probability **Tree Diagrams**

Name: _____ Class: _____

Tree diagrams get very large, very quickly. Even when representing just two rolls of a die, the result is 36 end branches (36 possible outcomes).



One can use mathematics to represent possible outcomes but the visual outline is lost. To find the number of possible outcomes, you multiply the number of possible outcomes of each event together to get the final number of outcomes. If you are looking for the number of possible outcomes for the number of possible outcomes of drawing the same card from a deck, the first chance would be $\frac{1}{52}$ and if put back, the second would be $\frac{1}{52}$. To get the answer, multiply the fractions. That is $152 \times \frac{1}{52}$ or $\frac{1}{2704}$! That is 1 chance in 2704.

Now, draw a tree diagram for flipping a coin 4 times. Try to be organized with the layout so it is easy to read/understand.

Would it be reasonable to draw a diagram for all the possibilities of flipping a coin 10 times?

Calculate it mathematically. Show your work.

What would be the number of possibilities for rolling a number cube 10 times?