MATH PLUS
A C A D E M Y

Winter Break Activities

At Math Plus Academy we always encourage students to engage in learning of any and all kinds! Winter breaks and breaks in general are great times for progression not regression! This packet includes a number of different activities students can complete to further their learning and earn new badges and credits along the way. These activities are tagged by class. Some challenges labeled 'All Classes' may present challenges for students in Recruit - Operative classes.

Activity #1 "All Time Greatest Mathematician"

All Classes   **100 Experience Points**

Leonhard Euler is considered one of the greatest mathematicians of all time. The problem is, not many people know the correct pronunciation of his last name.
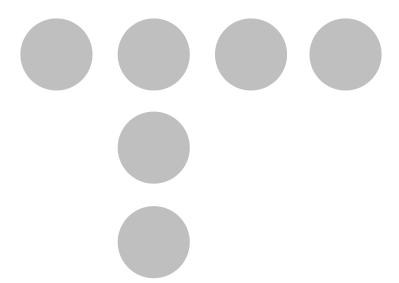
Complete the following three tasks to earn this badge:

1. **Find how to correctly pronounce "Euler" and then draw a picture that will help you remember how it is pronounced.** *(Optional: Include the phonetic spelling.)*

2. **Research Euler's life and accomplishments and write a couple sentences.**

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3. **Find Euler's formula and copy it below. We're not asking you to understand it, though you can try if you'd like ;)**

Activity #2 "Crissed and Crossed"
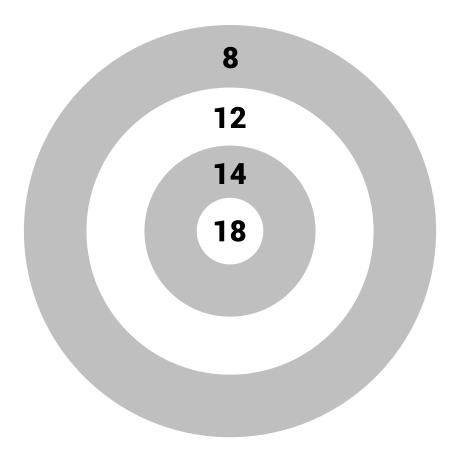
All Classes **100 Experience Points**

Place six coins in the layout as shown below. Notice that this arrangement forms two columns. The horizontal column has four coins. The vertical column has three coins. Can you move only one coin to make two columns that each contain four coins??

Activity #3 "On Target"

Ten arrows are shot at the target below. One of them misses the target completely. The other all struck it. If the total sum of point is one hundred, in which part of the target did each arrow strike

8

12

14

18

Activity #4 "Connect The Dots"

All Classes   **100 Experience Points**

Starting with the top center dot, can you connect all of the other nine dots with only four straight lines? The four lines must all be connected and your pencil can't leave the paper while drawing the answer.