

Open-Ended Group Task: Consecutive Sums

Whole numbers are consecutive if each number is one more than the previous number.

- 2 and 3 are consecutive
- 7, 8, 9, 10, and 11 are consecutive
- 8, 10, and 12 are NOT consecutive
- 1, 2, 3, 5 are NOT consecutive

Consecutive sums are sums that are created by consecutive numbers.

- $2 + 3 + 4$ is a consecutive sum that gives you 9.
- $7 + 8 + 9 + 10 + 11$ is a consecutive sum that gives you 45.
- $90 + 91$ is a consecutive sum that gives you 181.

YOUR GROUP'S TASK:

Explore the idea of consecutive sums. Try to find patterns.

That's all! There are no "right answers" for this activity. Just explore and see what you can figure out! It's easy to get started – just pick some consecutive numbers, add them together, and see what happens! Or pick a number and see if you can figure out how to write it as a consecutive sum. The more you explore, the more patterns you will find. Here are some ideas for your group to explore:

- Create several consecutive sums that all have the same number of terms and compare them
- Pick a bunch of numbers and try to find consecutive sums for each one. Are they all possible?
- Try to find numbers that can be written as a consecutive sum in more than way

THE POSTER:

After your group has made some discoveries, you will be responsible for creating a poster that displays them. You will likely be presenting this poster to the class. On your poster, include:

- The title: "Consecutive Sums: Our Discoveries"
- Any patterns/rules you figured out
- For each pattern or rule, include some examples that show how it works
- Also, try to figure out WHY your patterns/rules work. This is what turns a good poster into a great one!
- If you thought a rule was true but then you later figured out it was false, include this rule and the way you figured out that it was false
- The more neat and organized, the better! Don't write your rules/numbers too small.
- Color-code your numbers and examples to help people understand how your rules work.

RUBRIC

My Name: _____

My group mates: _____

Your Rules	Your group's rules are clearly explained and supported with examples.	____ out of 15
Poster Quality	Your poster is neat and easily readable	____ out of 5
Individual contribution	You contributed to the group adequately	____ out of 5
Above & Beyond (bonus)	You may earn bonus points here for especially impressive discoveries or explanations.	

Total: ____ out of 25