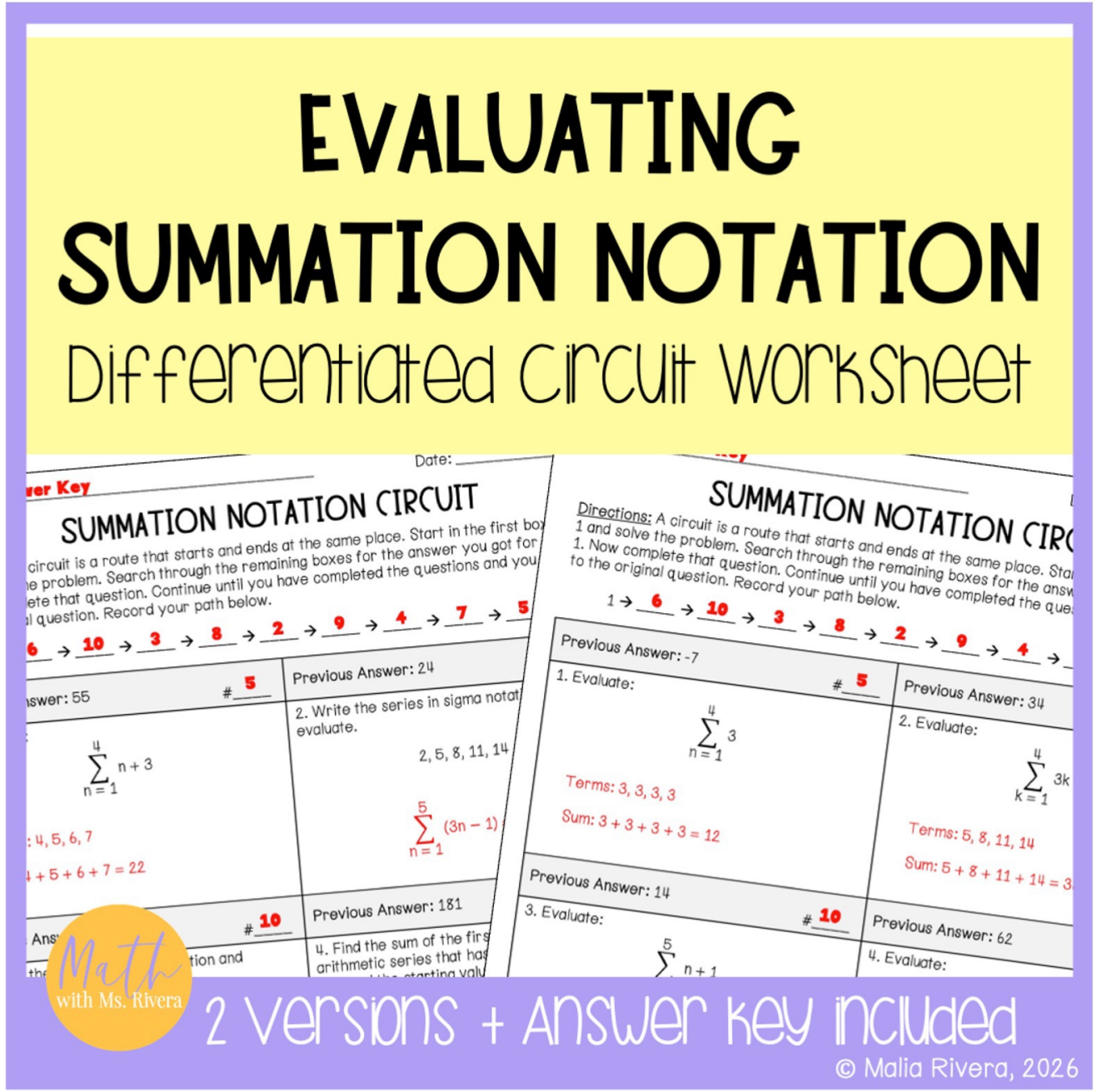
keep scrolling to get a sneak peek!

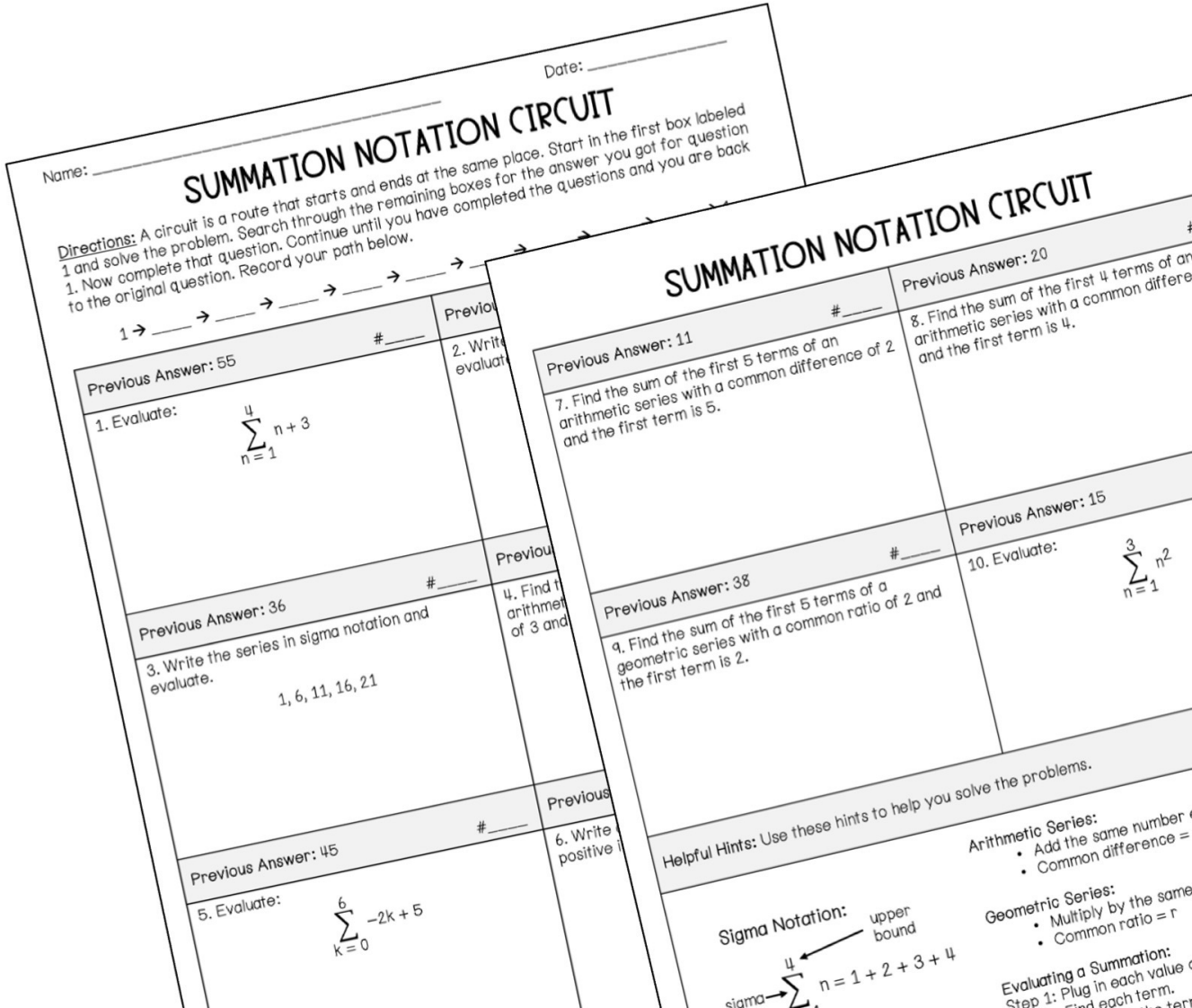
Help your Algebra 2 students practice **evaluating series using summation notation**. Students will be eager to get the self-checking benefits from this circuit activity!



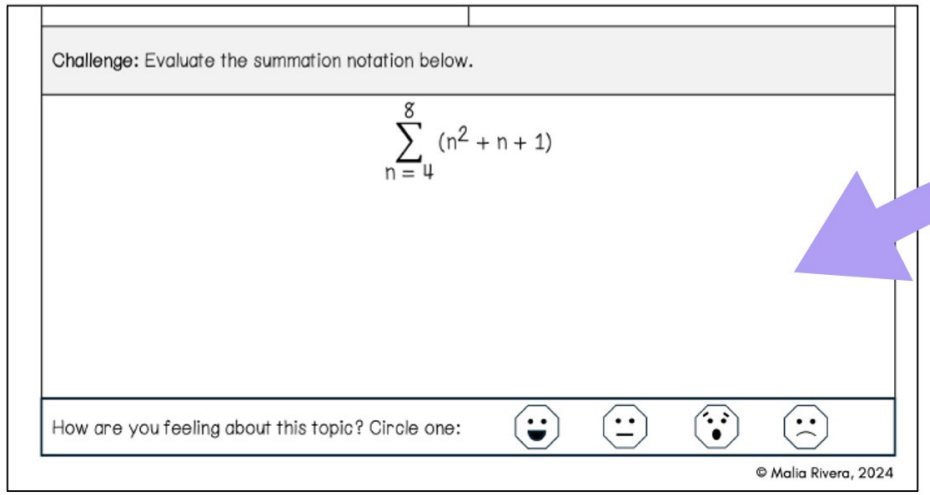
why do you need this?

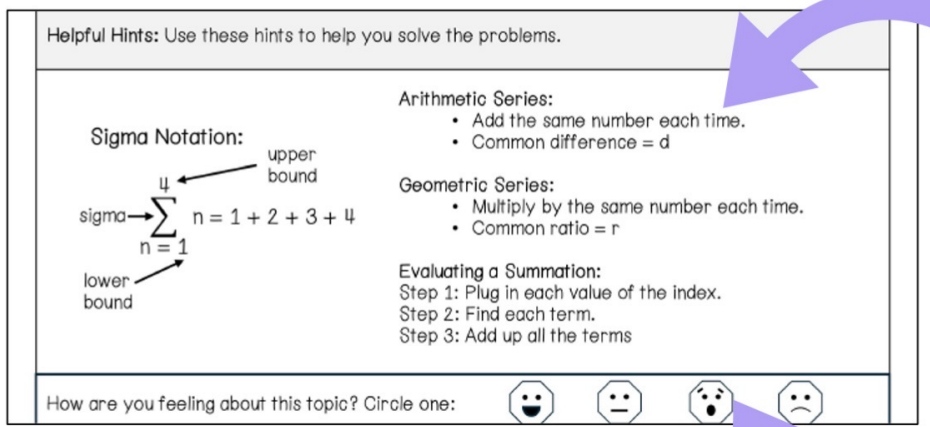
- It's self-checking! Your students will know if they are correct or not.
- 2 differentiated versions for all students practice this essential math skill.

Evaluating Series with Summation Notation Circuit



Evaluating Summation Notation *includes*:





- ✅ 10 self-checking problems
- ✅ a detailed answer key
- ✅ a standard version with an extension question
- ✅ a basic version with helpful hints section
- ✅ student self assessment

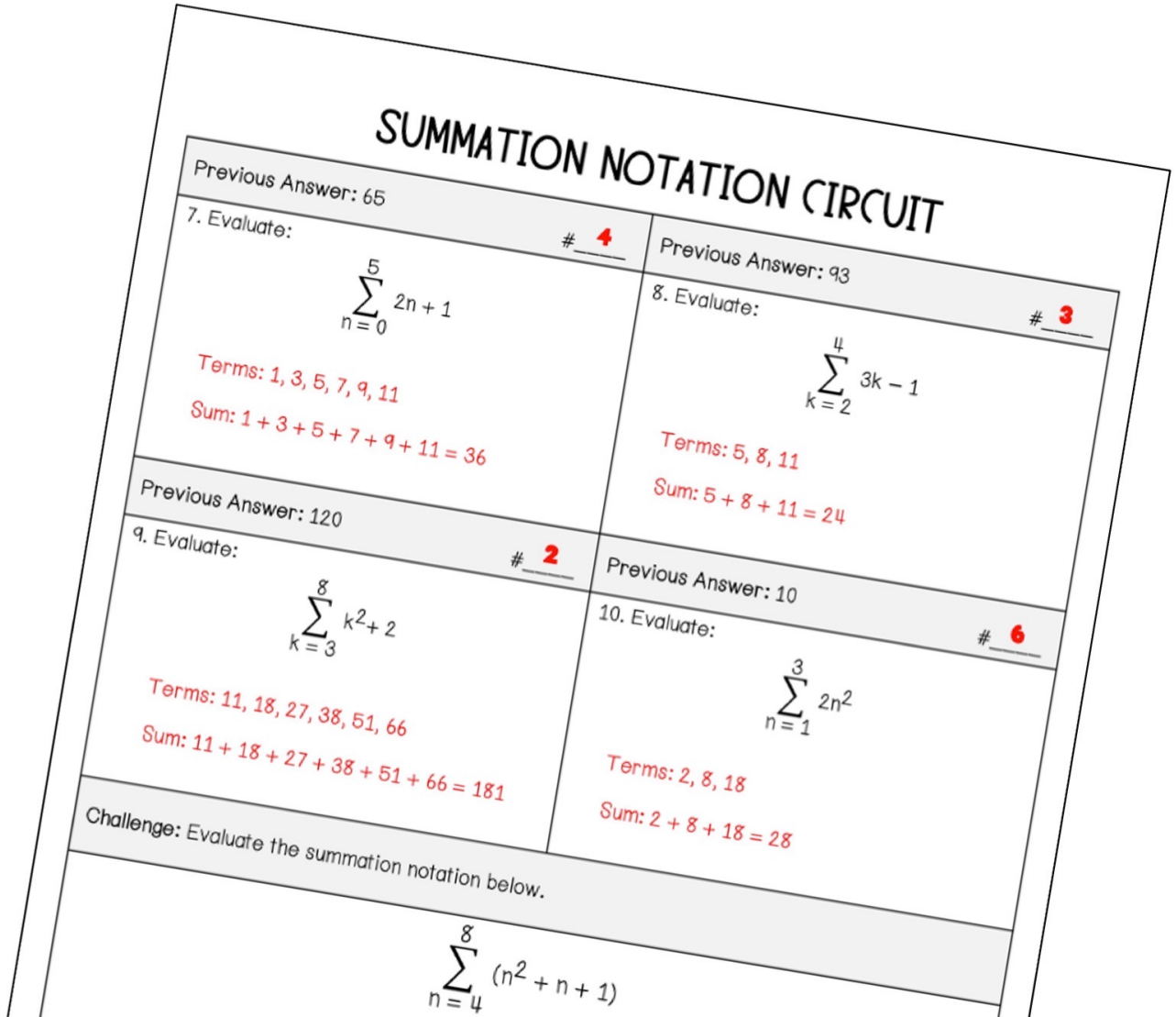
Evaluating Summation Notation

standards covered:

CCSS: HSA-SSE.B.4

TEKs: P.5.A, P.5.D

VA SOLs: F.AII.5



SUMMATION NOTATION CIRCUIT

Previous Answer: 65

7. Evaluate: $\sum_{n=0}^{5} 2n+1$ #4

Terms: 1, 3, 5, 7, 9, 11

Sum: 1 + 3 + 5 + 7 + 9 + 11 = 36

Previous Answer: 93

8. Evaluate: $\sum_{k=2}^{4} 3k-1$ #3

Terms: 5, 8, 11

Sum: 5 + 8 + 11 = 24

Previous Answer: 120

9. Evaluate: $\sum_{k=3}^{8} k^2+2$ #2

Terms: 11, 18, 27, 38, 51, 66

Sum: 11 + 18 + 27 + 38 + 51 + 66 = 181

Previous Answer: 10

10. Evaluate: $\sum_{n=1}^{3} 2n^2$ #6

Terms: 2, 8, 18

Sum: 2 + 8 + 18 = 28

Challenge: Evaluate the summation notation below.

$\sum_{n=4}^{8} (n^2+n+1)$

how this circuit resource works

Students can track their path at the top.

Students start with the first question.

Name: _____ Date: _____

SUMMATION NOTATION CIRCUIT

Directions: A circuit is a route that starts and ends at the same place. Start in the first box labeled 1 and solve the problem. Search through the remaining boxes for the answer you got for question 1. Now complete that question. Continue until you have completed the questions and you are back to the original question. Record your path below.

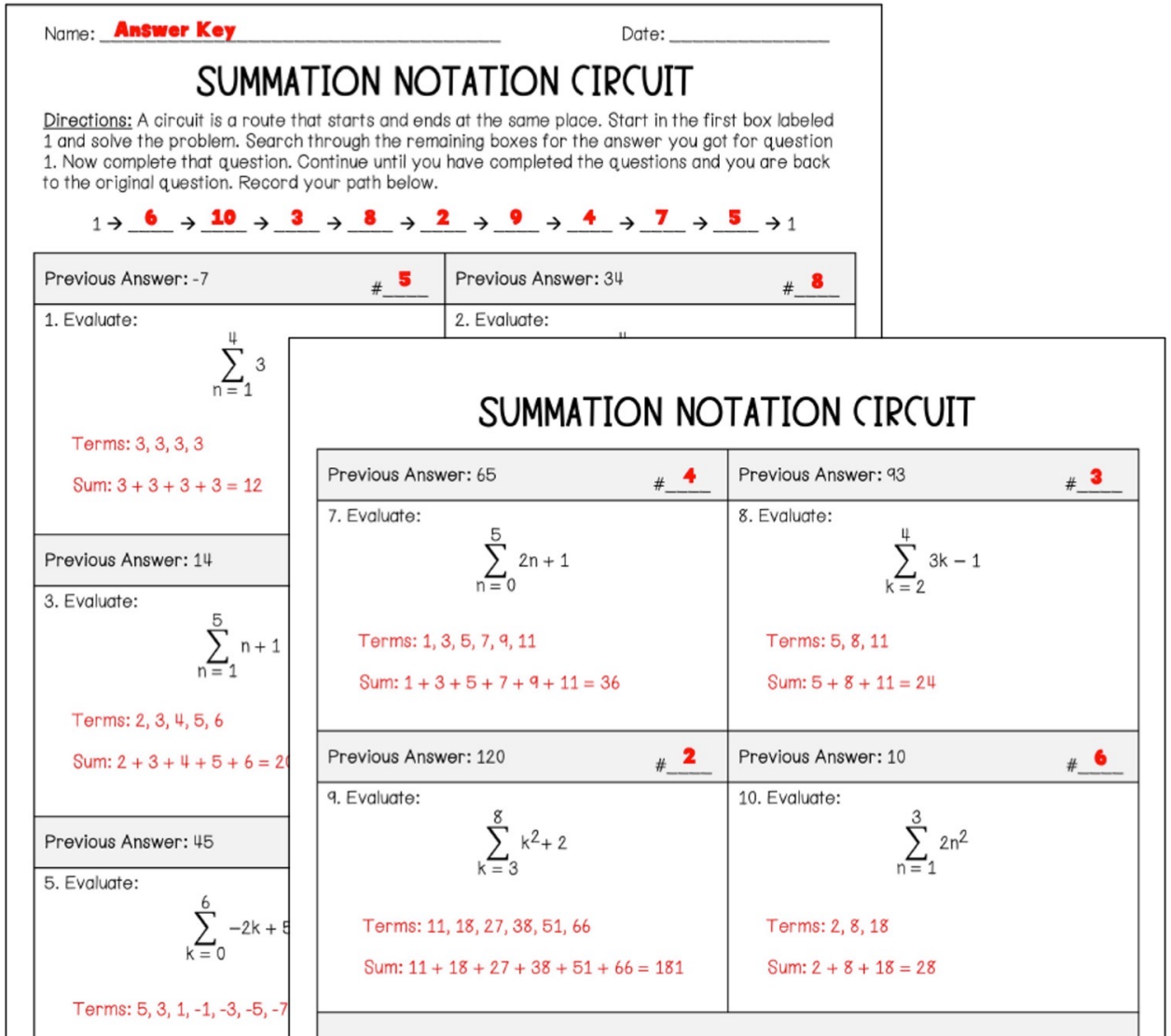
1 → ____ → ____ → ____ → ____ → ____ → ____ → ____ → ____ → ____ → 1

Previous Answer: 55 #____	Previous Answer: 24 #____
1. Evaluate: $\sum_{n=1}^{4} n+3$	2. Write the series in sigma notation and evaluate. 2, 5, 8, 11, 14
Previous Answer: 36 #____	Previous Answer: 181 #____
3. Write the series in sigma notation and evaluate. 1, 6, 11, 16, 21	4. Find the sum of the first 5 terms of the arithmetic series that has a common difference of 3 and the starting value is 7.

Then search for their answer on the worksheet. Once the answer is found, students complete the problem below it.

The last question they answer should lead back to problem #1 to "close" the circuit.

how to use this resource



Name: Answer Key Date:

SUMMATION NOTATION CIRCUIT

Directions: A circuit is a route that starts and ends at the same place. Start in the first box labeled 1 and solve the problem. Search through the remaining boxes for the answer you got for question 1. Now complete that question. Continue until you have completed the questions and you are back to the original question. Record your path below.

1 → 6 → 10 → 3 → 8 → 2 → 9 → 4 → 7 → 5 → 1

Previous Answer: -7 #5

1. Evaluate: $\sum_{n=1}^{4} 3$

Terms: 3, 3, 3, 3

Sum: 3 + 3 + 3 + 3 = 12

Previous Answer: 34 #8

2. Evaluate:

Previous Answer: 14

3. Evaluate: $\sum_{n=1}^{5} n+1$

Terms: 2, 3, 4, 5, 6

Sum: 2 + 3 + 4 + 5 + 6 = 2

Previous Answer: 45

5. Evaluate: $\sum_{k=0}^{6} -2k+5$

Terms: 5, 3, 1, -1, -3, -5, -7

SUMMATION NOTATION CIRCUIT

Previous Answer: 65 #4

7. Evaluate: $\sum_{n=0}^{5} 2n+1$

Terms: 1, 3, 5, 7, 9, 11

Sum: 1 + 3 + 5 + 7 + 9 + 11 = 36

Previous Answer: 93 #3

8. Evaluate: $\sum_{k=2}^{4} 3k-1$

Terms: 5, 8, 11

Sum: 5 + 8 + 11 = 24

Previous Answer: 120 #2

9. Evaluate: $\sum_{k=3}^{8} k^2+2$

Terms: 11, 18, 27, 38, 51, 66

Sum: 11 + 18 + 27 + 38 + 51 + 66 = 181

Previous Answer: 10 #6

10. Evaluate: $\sum_{n=1}^{3} 2n^2$

Terms: 2, 8, 18

Sum: 2 + 8 + 18 = 28

This is a great activity to use when reviewing how evaluate a series using summation notation.

It can be used right after teaching the concept or as homework.

This is also a **substitute-friendly** assignment!

hey there!

My name is Malia and I'm passionate about making learning and practicing math fun. I love creating engaging math resources for my students and I hope your students enjoy this activity too!

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