

ADDING AND SUBTRACTING ODD AND EVEN NUMBERS.

INVESTIGATIONS OVERVIEW PAGE

THIS PAGE IS A SUMMARY OF THE INVESTIGATIONS THAT STUDENTS MAY ENGAGE IN TO DEEPEN THEIR RELATIONAL UNDERSTANDING. INVESTIGATIONS WITH INSTRUCTIONS TO STUDENTS FOLLOW ON SUBSEQUENT PAGES.

- Children select cards to make combinations of odd and even numbers to add and subtract, identifying and explaining relationships including:

2 even numbers

2 odd numbers

3 even numbers

3 odd numbers

1 odd and 1 even

2 odd and 1 even

2 even and 1 odd

Reflection: What happens when we add and subtract combinations of odd and even numbers?

- Children make number patterns that repeat by adding even numbers or adding odd numbers. They record them, identifying relationships. For example, when starting with an even number and repeatedly adding even numbers, all numbers will be even, when starting with an odd number and repeatedly adding even numbers, all numbers will be odd, when repeatedly adding odd numbers, we'll have alternating odd and even numbers regardless of whether we started with an odd or an even numbers. *Reflection: What happens when we add and subtract combinations of odd and even numbers?*
- Children investigate partitioning numbers into 2 parts, then check their calculations using the relationships when adding odd and even numbers. For example, partitioning 82 into $79 + 3$ (2 odd = even), $65 + 17$ (2 odd = even) $60 + 22$ (2 even = even). *Reflection: What happens when we add and subtract combinations of odd and even numbers?*
- Children investigate partitioning numbers into 3 parts, then check their calculations using the relationships when adding odd and even numbers. For example, partitioning 482 into $400 + 79 + 3$ (2 odd and 1 even = even), $400 + 80 + 2$ (3 even = even) $180 + 300 + 2$ (3 even = even) (Links to Place Value Friends of 10 Partitioning 19 Patterns and Algebra 19) *Reflection: What happens when we add and subtract combinations of odd and even numbers?*

Adding and Subtracting Odd and Even Numbers

Select cards to make combinations of odd and even numbers to add and subtract.

2 even numbers

2 odd numbers

3 even numbers

3 odd numbers

1 odd and 1 even

2 odd and 1 even

2 even and 1 odd

Explain which combination result in odd numbers and which combinations result in even numbers.

Reflection: What happens when we add and subtract combinations of odd and even numbers?

Adding and Subtracting Odd and Even Numbers

Make number patterns that repeat by adding or subtracting even numbers or adding odd numbers.

Record them, identifying relationships.

For example,

Start with an even number and repeatedly add or subtract an even number.

Start with an odd number and repeatedly add or subtract an odd number.

Start with an even number and repeatedly add or subtract an odd number.

Start with an odd number and repeatedly add or subtract an even number.

Repeatedly alternate between adding or subtracting an odd and an even number.

Reflection: What happens when we add and subtract combinations of odd and even numbers?

Adding and Subtracting Odd and Even Numbers

Investigate partitioning numbers into 2 parts.

Check your calculations using the relationships when adding odd and even numbers.

For example,

When you partition an even number into 2 parts, are both partitions odd, even or a combination of odd and even?

When you partition an odd number into 2 parts, are both partitions odd, even or a combination of odd and even?

Reflection: What happens when we add and subtract combinations of odd and even numbers?

Adding and Subtracting Odd and Even Numbers

Investigate partitioning numbers into 3 parts.

Check your calculations using the relationships when adding odd and even numbers.

For example,

When you partition an even number into 3 parts, are all partitions odd, even or a combination of odd and even?

When you partition an odd number into 3 parts, are all partitions odd, even or a combination of odd and even?

Reflection: What happens when we add and subtract combinations of odd and even numbers?