Consecutive Numbers

Consecutive numbers are numbers which follow each other in order, without gaps.

5, 6, 7 and 8 are consecutive numbers.

Sometimes they are in reverse order when a countdown is happening, maybe for a rocket launch. However, they usually happen in an order going up, like when you turn each page of your reading book.

This investigation uses consecutive numbers. You are going to explore them with your mathematical brain. You never know, you might discover something really exciting!

First:
Choose four consecutive numbers between 20 and 80.
e.g. 21, 22, 23 and 24

___, ___, ___ and ___

Second:
Place a plus or minus between each of the chosen four until you have found all the possibilities
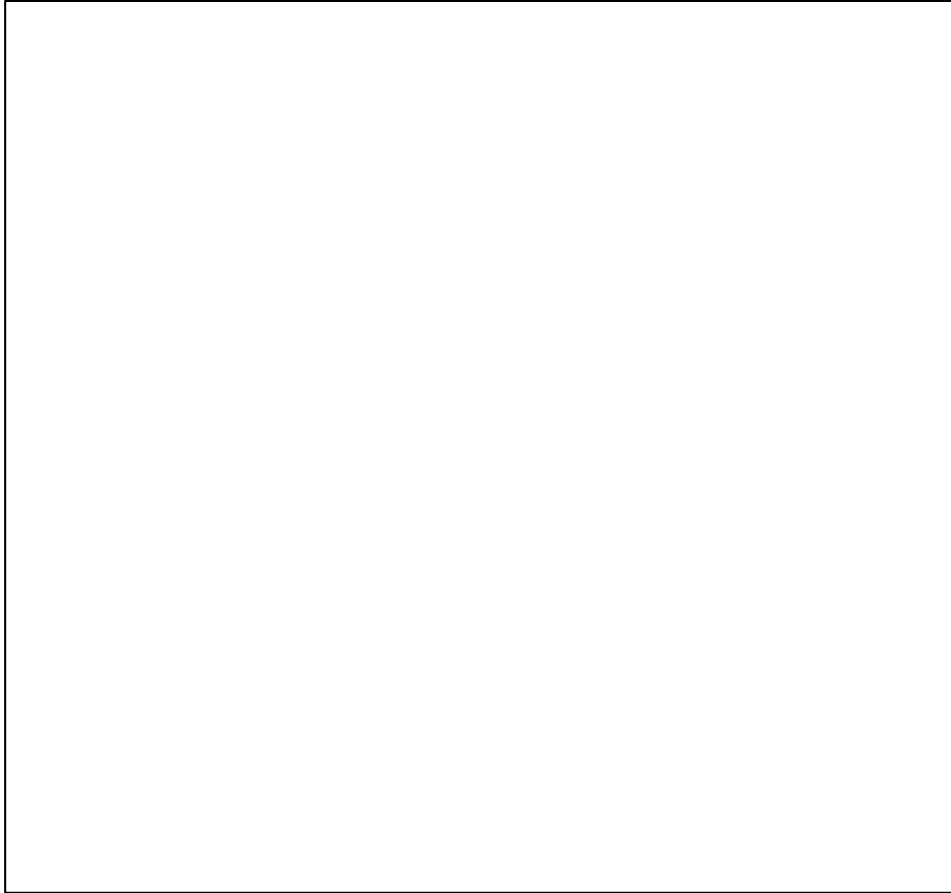e.g.
21 + 22 + 23 + 24 =
21 − 22 + 23 + 24 =

Third:

Find the answers to each of your calculations.

e.g.

21 + 22 + 23 + 24 = 50

21 − 22 + 23 + 24 = 46

Fourth:

Try another set of consecutive numbers. Write down what you notice and begin to compare findings. Begin to make predictions of what you think might happen if...

_____

_____

_____

_____

What would happen if your consecutive numbers included fractions and decimals? Record your findings.

_____

_____

_____

_____

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This investigation uses consecutive numbers. You are going to explore them with your mathematical brain. You never know, you might discover something really exciting!

First:
Choose four consecutive numbers between 20 and 80.
e.g. 11, 12, 13 and 14

21, 22, 23 and 24
Any four consecutive numbers between 20 and 80.

Second:
Place a plus or minus between each of the chosen four until you have found all the possibilities
e.g.
21 + 22 + 23 + 24 =
21 – 22 + 23 + 24 =

21 + 22 + 23 + 24 =
21 – 22 + 23 + 24 =
21 + 22 – 23 + 24 =
21 + 22 + 23 – 24 =
21 – 22 – 23 + 24 =
21 – 22 + 23 – 24 =
21 + 22 – 23 – 24 =
21 – 22 – 23 – 24 =

Above are all the plus and minus possibilities for any set of four consecutive numbers.

Third:

Find the answers to each of your calculations.

e.g.

21 + 22 + 23 + 24 =

21 – 22 + 23 + 24 =

21 + 22 + 23 + 24 = 90
21 – 22 + 23 + 24 = 46
21 + 22 – 23 + 24 = 44
21 + 22 + 23 – 24 = 42
21 – 22 – 23 + 24 = 0
21 – 22 + 23 – 24 = - 2
21 + 22 – 23 – 24 = - 4
21 – 22 – 23 – 24 = - 48

Fourth:

Try another set of consecutive numbers. Write down what you notice and begin to compare findings. Begin to make predictions of what you think might happen if...

Children should comment on how all of the answers are even. Depending on which order they have written their calculations down they may comment on how each answer decreases as you look down the calculations. They should comment how this happens for both sets of consecutive numbers. They might begin to make other predictions about what they think might happen for other sets of consecutive numbers.

What would happen if your consecutive numbers included fractions and decimals? Record your findings.

Decimals – Children should notice that the answers follow a similar pattern as before. The answers still decrease each time and each tenth is even.
Fractions – Answers may vary depending on which fractions they have chosen. Look for patterns in the children's answers and how they compare them to the initial investigation.