

Do you notice anything about the solutions when you add and/or subtract consecutive negative numbers?

Take, for example, four consecutive negative numbers, say:

$$-7, -6, -5, -4$$

Now place + and/or - signs between them.

E.g. $\boxed{-7} \bigcirc \boxed{+} \boxed{-6} \bigcirc \boxed{+} \boxed{-5} \bigcirc \boxed{+} \boxed{-4} = \boxed{-22}$

$$\boxed{-7} \bigcirc \boxed{+} \boxed{-6} \bigcirc \boxed{-} \boxed{-5} \bigcirc \boxed{-} \boxed{-4} = \boxed{-2}$$

There are many more possibilities. Try to list all of them, and then work out the solutions to the various calculations.

$$\boxed{} \bigcirc \boxed{} \bigcirc \boxed{} \bigcirc \boxed{} = \boxed{}$$

Choose a different set of four consecutive negative numbers and repeat the process.

Take a look at both sets of solutions. Notice anything?

Can you explain any similarities?

Can you predict some of the solutions you will get when you start with a different set of four consecutive negative numbers?

Test out any conjectures you may have.

Can you explain and justify your findings?