Choose 3 Numbers Probing Questions / Lines of Inquiry

* Can you describe a method for finding the original 3 numbers?
* Can you use algebra to find a method?
* Can you tell from your 3 totals if the original 3 numbers were all odd? How about all even?
* If your original 3 numbers are part of a linear/arithmetic sequence, is there anything special about the 3 totals? How about if the totals are part of a sequence, is there anything special about the original 3 numbers?
* Give someone 2 sets of 3 totals, where one of the original numbers is common to both sets. Can they find it?
* Give someone one of your original numbers and two of the totals of the sums. Can they find your original 3 numbers?
* If two of my totals are negative, does that mean two of my original numbers have to be negative?
* Can you think of numbers that give two totals that are the same?
* Can you make three totals that are consecutive numbers?
* What is it about the 3 totals that determines:
  + If the original 3 numbers are all positive
  + 1 is negative
  + 2 are negative
  + All 3 are negative?

Possible Modifications

* What if you know the differences of the pairs instead of the sums?
* Can you figure out the original 3 numbers if the totals are: 1st + 2nd, 2nd + 3rd, and then those two totals added together?
* If you multiplied the pairs of numbers instead of adding and gave someone your totals, can you find out their numbers then?
* If I just randomly picked 3 totals, could you find me 3 pairs of numbers that gave those totals (if the 3 numbers don’t have to be whole numbers)?
* If your 3 original numbers are surds, and you multiply the pairs, can you come up with 3 whole number totals?
* If you multiply in pairs and get 3 totals, is there a way of telling if you original 3 numbers were whole numbers?
* What about with 4 numbers adding together all the pairs?
* What about with 4 numbers adding them together in groups of 3?