

Just Average

You need: a classmate

ACTIVITY ONE

Pelesa and Seletā take 5 numbers out of the number bucket:

16 39 20 12 13

Wow! They add up to exactly 100.



That means the average is 20.

Then 3 of them are below average. I wouldn't have expected that.

They take out 4 new numbers:

5 2 40 31

If we use 22 for the fifth number, we'll get an average of 20 again.



Then there will be 3 numbers *above* average.



Yes. And 2 numbers *way* below average.

They take out another 4 numbers:

3 1 89 7

These 4 add up to exactly 100 already.

If we add 0, we can still make 20 the average of the 5 numbers.

Does 0 count as a number?

Yes it does. And now only 1 number is above average.

The 3 sets of numbers all look very different, don't they?



Yes. But they all have the same average.



1. Use Pelesa and Seletā's first set of 5 numbers for this question:
What is the average if you:
 - a. Add 10 to each number?
 - b. Change the order of the numbers?
 - c. Double each number?
 - d. Reduce one number by 8 and add 8 to another?

2. Pelesa adds a sixth number to their set:

16 39 20 12 13 ?

What must this sixth number be if the average:

- a. stays unchanged (at 20)?
 - b. drops to 17?
 - c. increases to 25?
3. You add one more number to a set of numbers, and it increases the average by 5.
 - a. Write a rule for finding the number that does this.
 - b. Explain your rule to a classmate and get them to test it for you.



ACTIVITY TWO



1. A cricketer scores an average of 27 runs per game in the first 3 games of the season. At the end of 5 more games, his average is 37. After playing his ninth game, his average drops to 33. In his tenth game, he scores 73.
 - a. How many runs does he score in games 4 to 8?
 - b. How many runs does he score in game 9?
 - c. What is his average for the 10 games?
 - d. His goal was to average 40 runs this season. The eleventh game is his last. How many runs will he have to score in this game to reach his goal? Do you think he's likely to reach his goal? Explain.
2. "Here we are in the 21st century, and half our population is still not reaching the average life expectancy. It's just not good enough." Discuss this statement with a classmate.