

Flashback 4

Warm-Up Challenge

- 1) Write "38 out of 100" as a percentage.
- 2) What is the 3 worth in 6.103?
- 3) Work out $4\frac{3}{5} - 3\frac{1}{2}$
- 4) What is the mathematical name for a triangle with two equal sides and two equal angles?

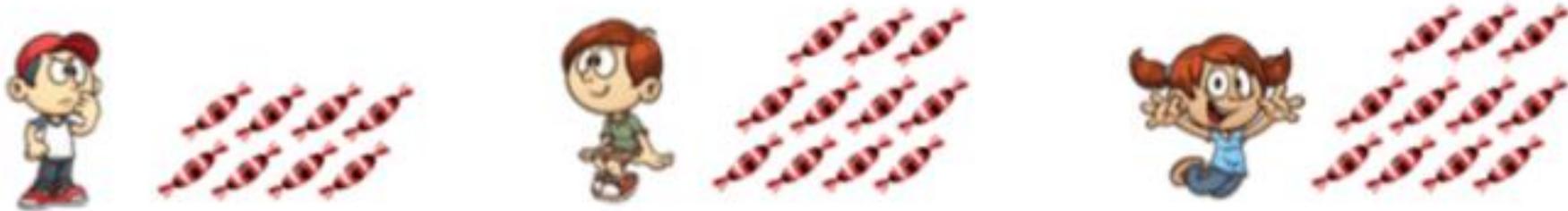


Warm your brains up thinking about the above questions

Understand the mean as an average

Ajay has 8 sweets, Kari has 11 sweets and Anita has 11 sweets.

How could you find out the average amount of sweets the children have?

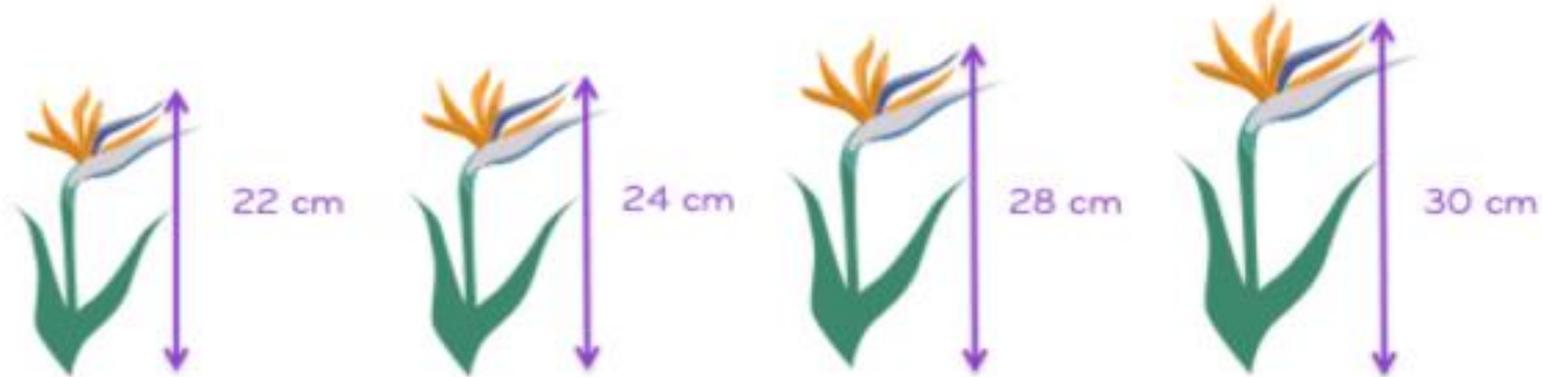


One way of finding an average amount is by finding the **mean**, which is the number of sweets each person would have if we **shared** them out **equally**.



Anita and Kari could give Ajay one each, so the mean would be 10.

Calculate means



But you can't always draw pictures or share out in your head.

So, we can find the **mean** in **two** steps.

Step 1. Add all the values together.

Step 2. Divide by how many values there are.

Can you find the **mean height** for these plants?

cm

Calculate means

Child	Number of lengths
Sam	15
Karen	18
Anna	21
Karl	21
Maajid	20



Find the **mean** number of lengths these children have swum.

lengths

Calculate means

Eric held his breath, **four** times, for as long as he could. Here are his results:

	How long I held my breath for
Attempt 1	155 seconds
Attempt 2	161 seconds
Attempt 3	162 seconds
Attempt 4	162 seconds



Use the two-step method to find the mean length of time Eric held his breath for.

seconds

Understand the mean as an average

Ajay has 8 sweets, Kari has 11 sweets and Anita has 11 sweets.



"If Kari and Anita both give Ajay one of their sweets each child will have 10 sweets each so the mean is 10."

"If I add up all the sweets that's 30 sweets. If I divide 30 by 3 that's 10 so the mean is 10."

Read each pupil's thoughts carefully. Which pupil is correct?

Practice time

1. Find the **mean** age of these football players.



2. The **mean** of three numbers is **30**. Two of the numbers are **28** and **29**. What is the other number?

Independent Activity: Now grab a pen and paper and see how many questions you can answer

1 Scott has 2 counters. 

Dani has 7 counters. 

Kim has 3 counters. 

Share the counters evenly in order to find the mean number of counters.

The mean number of counters is

2 Find the mean of each set of numbers.

a)

3	2	7	4	4
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b)

12	8	15	11	6	2
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c)

5	2	2	9	7	5	6	5	3	7
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3 Huan collects football cards.
The table shows how many he collected over four years.
Work out the mean number of cards collected per year.

Year	Number of cards
2016	56
2017	104
2018	81
2019	103

- 4 a) The mean of four numbers is 9
What is the total of the four numbers?
- b) Write an example of what the four numbers could be if none of them are 9
- Compare answers with a partner.
How many different solutions can you find?

5 The table shows how many pets a number of children have.
One value is missing.

Name	Number of pets
Brett	4
Nijah	0
Rosie	1
Teddy	2
Esther	
Tom	7

The mean number of pets is 3

How many pets does Esther have?

Optional Brain Tickler:

Six numbers are written on cards.

The mean of the numbers is 12

Fill in the two missing numbers if one is double the other.

13		4	16	6	
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How many ways?

The average of three numbers is 9.

The difference between the smallest and largest number is 5.

What could the numbers be?

Level 1: I can find a way

Level 2: I can find different ways

Level 3: I know how many ways there are