

Year 6 Maths
Week 13 Lesson 1
Statistics – Mean Average



Statistics – Read and Interpret Line Graphs

In this lesson you will:

- apply their addition and division skills to calculate the mean average in a variety of contexts.



What is the Mean Average?

The mean is the total of the numbers divided by how many numbers there are.

- To find the mean, add all the numbers together then divide by the number of numbers.
- Eg $6 + 3 + 100 + 3 + 13 = 125 \div 5 = 25$
- The mean is 25.

The mean is not always a whole number.

Introduction

Complete the additions below.

$$\begin{array}{r} \boxed{7} \\ \boxed{1 \ ?} \\ \boxed{6} \\ \boxed{4} \\ \hline \boxed{? \ 8} \end{array}$$

$$\begin{array}{r} \boxed{1 \ 6} \\ \boxed{? \ 3} \\ \boxed{3 \ 5} \\ \boxed{2 \ 5} \\ \hline \boxed{9 \ ?} \end{array}$$

$$\begin{array}{r} \boxed{1 \ ? \ . \ 2} \\ \boxed{2 \ 1 \ . \ 6} \\ \boxed{5 \ . \ 1} \\ \boxed{3 \ 4 \ . \ 3} \\ \hline \boxed{? \ 2 \ . \ ?} \end{array}$$

Complete the divisions below.

$$\boxed{9 \ 8} \div \boxed{?} = \boxed{1 \ 4}$$

$$\boxed{3 \ 6} \div \boxed{8} = \boxed{4 \ . \ ?}$$

$$\boxed{? \ 6} \div \boxed{8} = \boxed{9 \ . \ 5}$$

$$\boxed{6 \ 3} \div \boxed{?} = \boxed{7}$$

Introduction

Complete the additions below.

$$\begin{array}{r} \boxed{7} \\ \boxed{11} \\ \boxed{6} \\ \boxed{4} \\ \hline \boxed{28} \end{array}$$

$$\begin{array}{r} \boxed{16} \\ \boxed{23} \\ \boxed{35} \\ \boxed{25} \\ \hline \boxed{99} \end{array}$$

$$\begin{array}{r} \boxed{11.2} \\ \boxed{21.6} \\ \boxed{5.1} \\ \boxed{34.3} \\ \hline \boxed{72.2} \end{array}$$

Complete the divisions below.

$$\boxed{98} \div \boxed{7} = \boxed{14}$$

$$\boxed{36} \div \boxed{8} = \boxed{4.5}$$

$$\boxed{76} \div \boxed{8} = \boxed{9.5}$$

$$\boxed{63} \div \boxed{9} = \boxed{7}$$

Varied Fluency 1

Calculate the mean of these numbers.

77

14

58

9

13

21

Varied Fluency 1

Calculate the mean of these numbers.

77

14

58

9

13

21

$$(77 + 14 + 58 + 9 + 13 + 21) \div 6 = 32$$

Varied Fluency 2

Which is the correct mean of these children's house points.



17



19



21



15



13

16

17

18

Varied Fluency 2

Which is the correct mean of these children's house points.



17



19



21



15



13

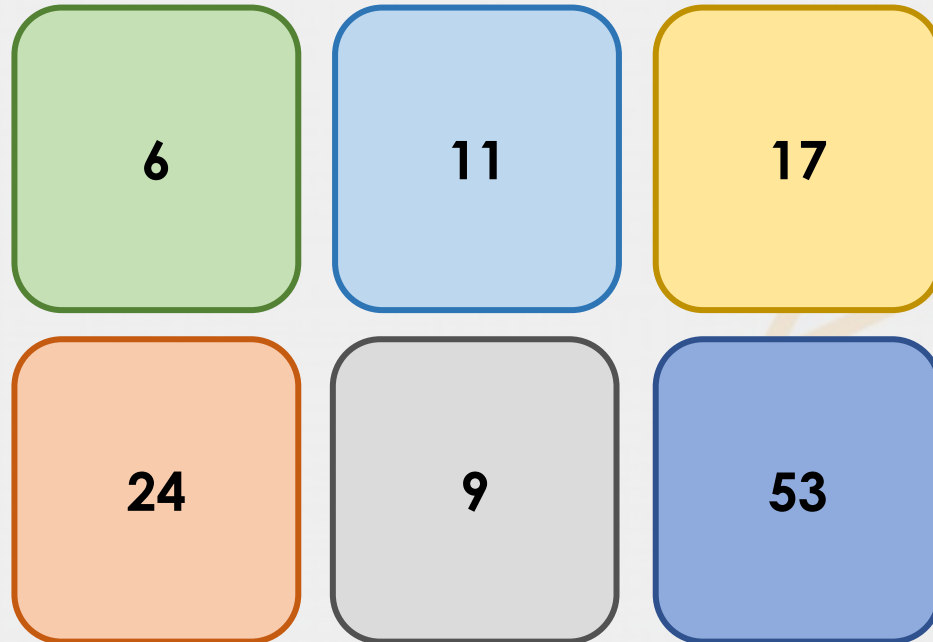
16

17

18

Varied Fluency 3

True or false?
The mean of these numbers is 19.



Varied Fluency 3

True or false?
The mean of these numbers is 19.



False

$$(6 + 11 + 17 + 24 + 9 + 53) \div 6 = 20$$

Varied Fluency 4

Six friends weigh 71.5kg, 56.3kg, 70.1kg, 66.9kg, 58.7kg and 60.5kg.



What is their mean weight?

Varied Fluency 4

Six friends weigh 71.5kg, 56.3kg, 70.1kg, 66.9kg, 58.7kg and 60.5kg.



What is their mean weight?

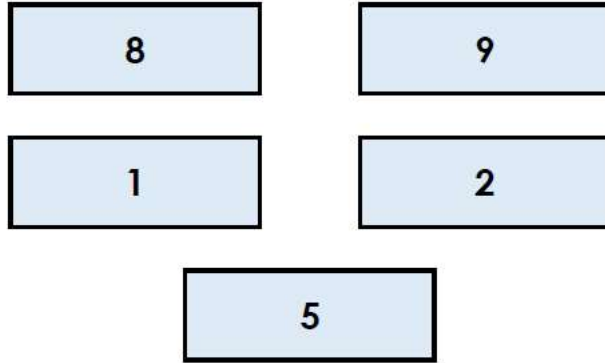
$$(71.5 + 56.3 + 70.1 + 66.9 + 58.7 + 60.5) \div 6 =$$

64kg

Main Tasks – part i

Level 1

1a. Calculate the mean of these numbers.



VF

2a. Tick the correct mean of these children's test scores.



13

17

12

18

13

14

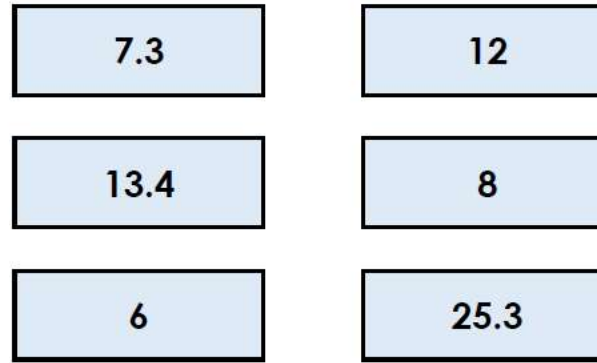
15



VF

Level 2

5a. Calculate the mean of these numbers.



VF

6a. Tick the correct mean of these children's test scores.



23

21

19

30

27

20

24

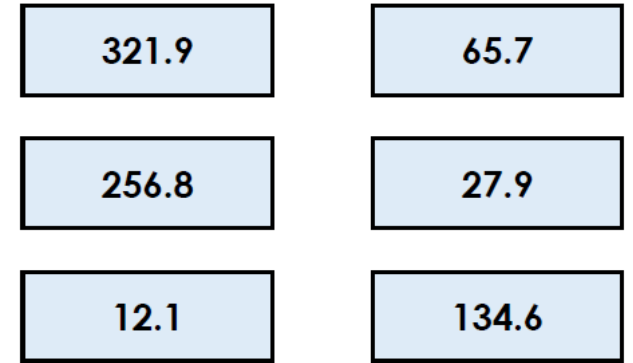
23



VF

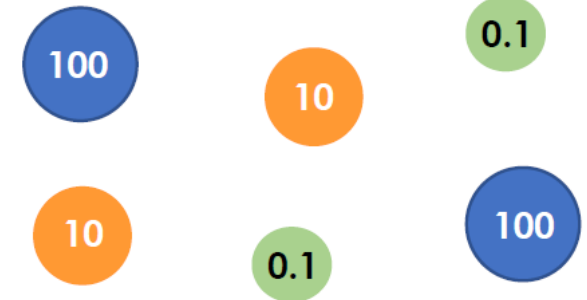
Level 3

9a. Calculate the mean of these numbers.



VF

10a. Calculate the mean value of the place value counters.



VF

Main Tasks – part ii

Level 1

3a. True or false? The mean of these numbers is 8.



VF

4a. Four friends want to share out their sweets equally. They have 8, 4, 7 and 9 sweets.



What is the mean amount of sweets?



VF

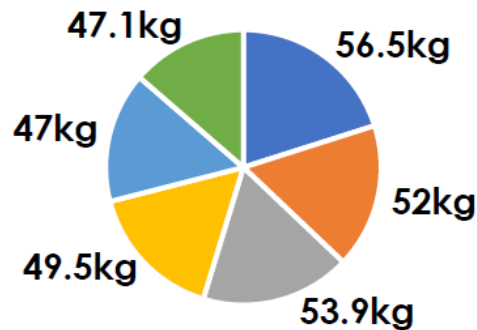
Level 2

7a. True or false? The mean of these numbers is 16.



VF

8a. The chart below shows the weight of six different chimpanzees.



What is their mean weight?



VF

Level 3

11a. True or false? The mean of these numbers is $108\frac{1}{4}$.



VF

12a. Six children have been growing plants and want to calculate the mean height. They measure 12cm, 204mm, 0.17m, 18.3cm, 167mm, 0.14m.



What is their mean height in cm?



VF

Developing

- 1a. 5
2a. 15
3a. False (6)
4a. 7

Expected

- 5a. 12
6a. 24
7a. True
8a. 51kg

Greater Depth

- 9a. 136.5
10a. 36.7
11a. False ($105\frac{1}{4}$) or 105.25
12a. 16.4cm

Here are the answers. How did you do?

There's going to be two more pages of questions. If you made some mistakes then great! Mistakes are brilliant as we remember them and learn from them.

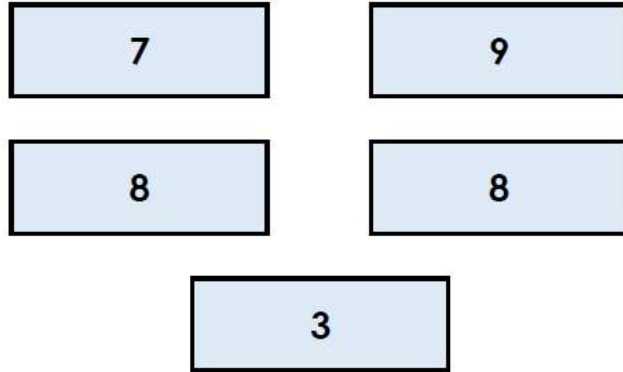
The following questions are similar to the previous ones, so apply what you learnt from the previous ones.

You may also want to move up a level if you're feeling confident.

Main Tasks – part iii

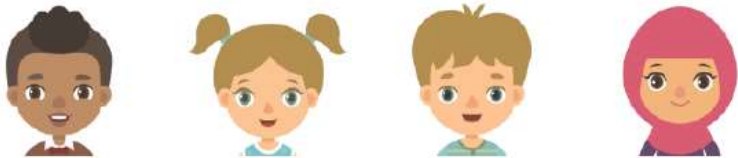
Level 1

1b. Calculate the mean of these numbers.



VF

2b. Tick the correct mean of these children's Sports Day scores.



19

21

22

26

21

22

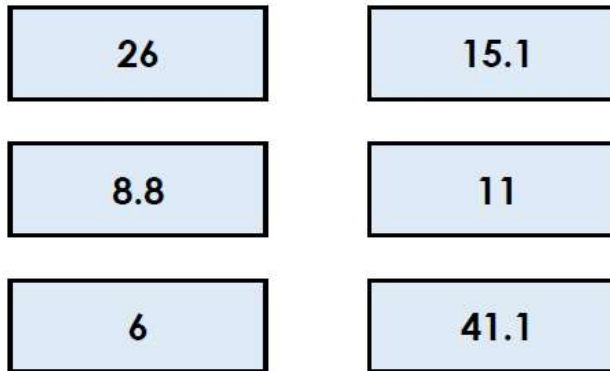
23



VF

Level 2

5b. Calculate the mean of these numbers.



VF

6b. Tick the correct mean of these children's Sports Day scores.



25

23

27

26

29

24

25

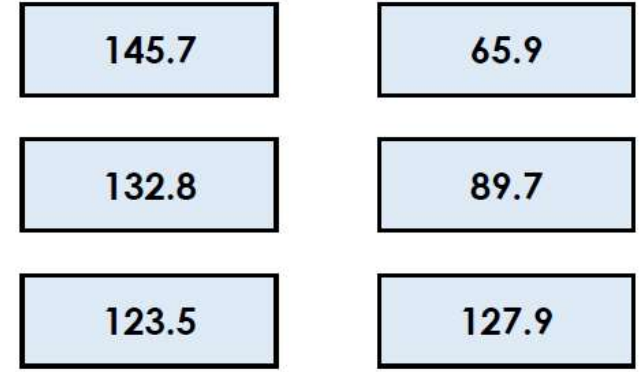
26



VF

Level 3

9b. Calculate the mean of these numbers.



VF

10b. Calculate the mean of these coins.

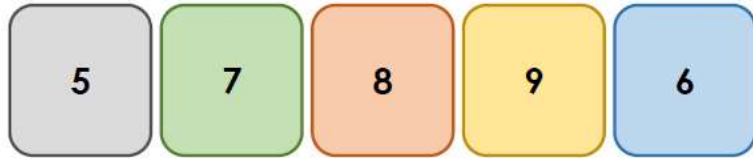


VF

Main Tasks – part iv

Level 1

3b. True or false? The mean of these numbers is 7.



VF

4b. Four friends want to share their toys out equally. They have 9, 8, 3 and 12 toys.



What is the mean amount of toys?



VF

Level 2

7b. True or false? The mean of these numbers is 19.



VF

8b. The table below shows how much six friends spent on sweets.

Leon	£1.64
Alice	£0.65
Chloe	£2.33
Noah	£1.62
Jamie	£3.25
Samantha	£2.51



What is the mean amount they spent?



VF

Level 3

11b. True or false? The mean of these numbers is $220\frac{1}{3}$.



VF

12b. Six friends want to calculate their mean height. They measure 1.43m, 136cm, 1.4m, 139cm, 1410mm, 1350mm.



What is their mean height in metres?



VF

Developing

1b. 7

2b. 22

3b. True

4b. 8

Expected

5b. 18

6b. 26

7b. False (20)

8b. £2

Greater Depth

9b. 114.25

10b. £0.76

11b. True

12b. 1.39m

Well done!

If there's anything you are still unsure of from today's lesson please contact your teacher.