



Maths

Calculation Policy

Statistics

2024

EYFS → page

Year One → page

Year Two → page

Year Three → page

Year Four → page

Year Five → page

Year Six → page

Year Two

Key I can count in 5s

0 $\rightarrow$ x I can count a tally using 5s

3 |||
6 ~~||||~~ |
12 ~~||||~~ ~~||||~~ ||
17 ~~||||~~ ~~||||~~ ~~||||~~ ||

Key I can record a tally


23



0—x I can read a tally chart

Colour	Tally	Total
Red		7
Black		20
Silver		16
Blue		11

0 $\leftarrow$ x I can create a tally chart

0 ~~x~~ I can read simple tables

Weather	Number of days
sun	9
rain	8
cloud	14

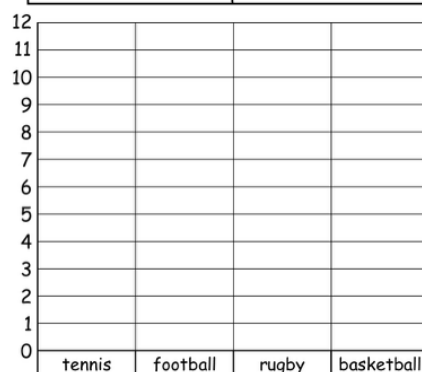
0 → I can create simple tables

➡ I can read block diagrams



➡ I can create block diagrams

Sport	Total
tennis	8
football	11
rugby	5
basketball	2



➡ I can read pictograms (1:1)

Key  = 1 sock

Sock	Number of socks
spotty	
stripy	
plain	

➡ I can create pictograms (1:1)

0→ I can read pictograms (1:2, 1:5, 1:10)

Key  = 2 socks

Sock	Number of socks	
spotty		10
stripy		8
plain		12

0→ I can create pictograms (1:2, 1:5, 1:10)

0→ I can answer questions about the data given using scales 2, 5 and 10

0→ I can ask and answer questions about the totals

0→ I can ask and answer comparison questions

Year Three and Four (both taught in Year Four):

0→ I can count a tally using 5s

0→ I can record a tally

0→ I can read a tally chart

0→ I can create a tally chart

0→ I can read simple tables

0→ I can create simple tables

0→ I can read block diagrams

0→ I can create block diagrams

0→ I can read pictograms (1:1)

0→ I can create pictograms (1:1)

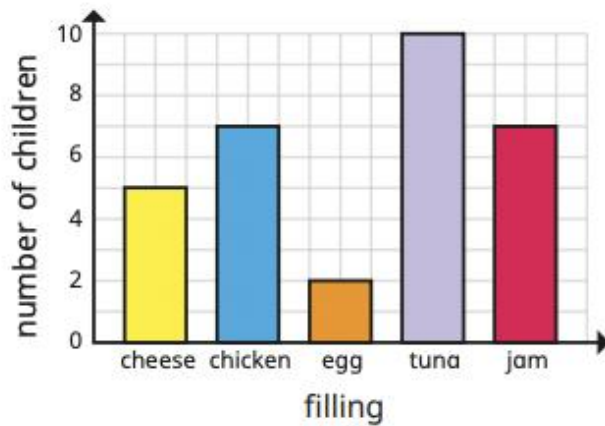
0→ I can read pictograms (1:2, 1:5, 1:10)

0→ I can create pictograms (1:2, 1:5, 1:10)

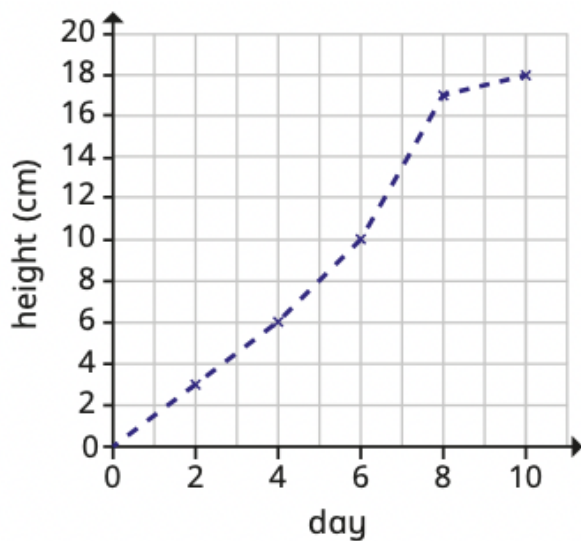
0→ I can interpret data from a pictogram when one symbol represents more than one unit

0→ I can answer questions about the data given using scales 2, 5 and 10

- ➔ I can interpret data in bar charts and understand varying scales of multiples of 2, 5 and 10



- ➔ I can draw bar charts when using varying scales of multiples of 2, 5 and 10
- ➔ I can interpret data from a line graph (including time graphs)



- ➔ I can choose an appropriate scale when representing data
- ➔ I can draw a line graph (including time graphs)
- ➔ I can ask and answer questions about the totals
- ➔ I can ask and answer comparison questions
- ➔ I can answer questions that involve comparison, sum and difference using all of the above

Year Five:

- 0 ➡ I can interpret data from a pictogram when one symbol represents more than one unit
- 0 ➡ I can interpret data in bar charts and understand varying scales of multiples of 2, 5 and 10
- 0 ➡ I can draw bar charts when using varying scales of multiples of 2, 5 and 10
- 0 ➡ I can interpret data from a line graph (including time graphs)
- 0 ➡ I can choose an appropriate scale when representing data
- 0 ➡ I can draw a line graph (including time graphs)
- 0 ➡ I can answer questions that involve comparison, sum and difference using all of the above

- 0 ➡ I can answer questions that involve comparing the values between two points on a line graph

Eg → When does the temperature rise the quickest?

- 0 ➡ I can answer questions that involve finding the difference between two points on a line graph

Eg → By how much does the temperature rise between 1 and 2pm?

- 0 ➡ I can answer questions that involve finding the sum of values on a line graph

Eg → How far did the lorry driver travel in total?

- 0 ➡ I can read a table (including timetables)
- 0 ➡ I can complete a table (including timetables)
- 0 ➡ I can interpret information in a table (including timetables)
- 0 ➡ I can answer questions that involve tables (including timetables)

Eg → How long does the journey from Chester to Northwich take on the bus?

Year Six:

- 0 ➡ I can answer questions that involve comparing the values between two points on a line graph
- 0 ➡ I can answer questions that involve finding the difference between two points on a line graph

- 0 ➡ I can answer questions that involve finding the sum of values on a line graph
- 0 ➡ I can read a table (including timetables)
- 0 ➡ I can complete a table (including timetables)
- 0 ➡ I can interpret information in a table (including timetables)
- 0 ➡ I can answer questions that involve tables (including timetables)

- 0 ➡ I can use my knowledge of fractions and percentages to interpret pie charts
- 0 ➡ I can construct a simple pie chart using common fractions
- 0 ➡ I can interpret a line graph when the answer lies between two given intervals
- 0 ➡ I can interpret a line graph that represents a conversion

The mean:

https://www.ncetm.org.uk/media/h1lfx1if/ncetm_spine2_segment26_y6.pdf#page=4

- 0 ➡ I can explain the relationship between the mean and sharing equally

1. Diagrams

- 'If Ben, Cath and Dave each give one card to Amy, she will have four.'

●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●
Amy	Ben	Cath	Dave	Evie

- 'The cards have been shared equally.'

2. Bar model

Total number known:

'Amy, Ben, Cath, Dave and Evie have twenty football cards between them. How many do they have each if they share them equally?'

20				
?	?	?	?	?

Redistributing unequal shares:

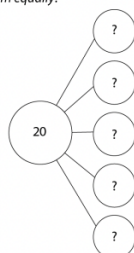
'Amy has one card, Ben has five cards, Cath has three cards, Dave has nine cards and Evie has two cards. How many do they have each if they share them equally?'

?				
1	5	3	9	2
?	?	?	?	?

3. Part part whole model

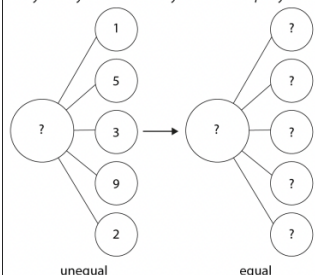
Total number known:

'Amy, Ben, Cath, Dave and Evie have twenty football cards between them. How many do they have each if they share them equally?'



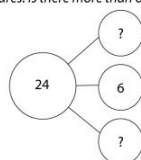
Redistributing unequal shares:

'Amy has one card, Ben has five cards, Cath has three cards, Dave has nine cards and Evie has two cards. How many do they have each if they share them equally?'

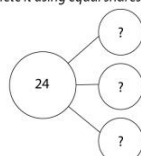


Dividing quantities into equal or unequal shares:

- 'Complete this part-part-whole model using unequal shares. Is there more than one possibility?'



- 'Now complete it using equal shares.'



0 I can explain how to calculate the mean of a set of data

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

Use the following stem sentences:

- **'The dividend is ____.'**
- **'The divisor is ____ because ____.'**
- **'The mean is ____ ÷ ____ = ____.'**

- *'What is the mean number of books read in the summer term?'*

Name	Number of books read in the summer term
Fred	5
Grey	4
Hari	1
Indigo	2
James	5
Kia	3
Liz	8
Mohamed	4

- *'The dividend is "32" (5 + 4 + 1 + 2 + 5 + 3 + 8 + 4).'*
- *'The divisor is "8" because there are eight children.'*
- *'The mean is $32 \div 8 = 4$.'*

➡ I can explain how the mean changes when the total quantity or number of values changes

Unknown total:

- *'This table shows the weights of some dogs in kilograms. What is the mean weight?'*

Name of dog	Weight (kg)
Molly	14
Boss	8
Tucker	4
Chester	3
Maggie	6

- *'The dividend is $14 + 8 + 4 + 3 + 6 = 35$.'*
- *'The divisor is "5" because there are five dogs.'*
- *'The mean is $35 \text{ kg} \div 5 = 7 \text{ kg}$.'*

- *'This table shows the weights of the same dogs a year later. What is the mean weight now?'*

Name of dog	Weight (kg)
Molly	15
Boss	10
Tucker	4
Chester	4
Maggie	7

- *'The dividend is $15 + 10 + 4 + 4 + 7 = 40$.'*
- *'The divisor is "5" because there are five dogs.'*
- *'The mean is $40 \text{ kg} \div 5 = 8 \text{ kg}$.'*
- *'This table shows the weights of the same dogs two*

year later. What is the mean weight now?'

Name of dog	Weight (kg)
Molly	12
Boss	8
Tucker	3
Chester	2
Maggie	5

- *'The dividend is $12 + 8 + 3 + 2 + 5 = 30$.'*
- *'The divisor is "5" because there are five dogs.'*
- *'The mean is $30 \text{ kg} \div 5 = 6 \text{ kg}$.'*

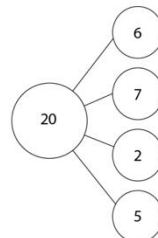
➔ I can explain how to calculate the mean when one of the values in the data set is zero or missing

'The table shows the number of children who went to the library at break time this week. What is the mean number of children per day?'

Day of the week	Mon	Tue	Wed	Thu	Fri
Number of children	6	0	7	2	5

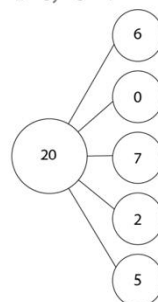
• This is Fatima's method and diagram:'

$$(6 + 7 + 2 + 5) \div 4 = 5$$



• This is Alicia's method and diagram:'

$$(6 + 0 + 7 + 2 + 5) \div 5 = 4$$



'The mean time for a 3 kilometre race is 14 minutes. What could Billy's time be?'

Amir	Billy	Carla	Dean
13	?	15	14

- Step 1 – multiply the mean by the number of values in the set to find the total time for all runners:

$$14 \times 4 = 56$$

- Step 2 – add together the values we have for three runners:

$$13 + 15 + 14 = 42$$

- Step 3 – subtract this answer from the total time:

$$56 - 42 = 14$$

- 'Billy's time is 14 minutes.'

0→ I can explain how to use the mean to make comparisons between two sets of information

'The two tables below show the spelling test results for two groups of children. The maximum possible score in the test is 10 points. All of the results are whole numbers. Which group did better overall?'

Orange group:

Child	A	B	C	D	E
Score	9	9	5	8	9

Blue group:

Child	A	B	C	D	E	F
Score	7	10	6	7	6	9

- *'The mean for the orange group is $(9 + 9 + 5 + 8 + 9) \div 5 = 8.$ '*
- *'The mean for the blue group is $(7 + 10 + 6 + 7 + 6 + 9) \div 6 = 7.5.$ '*
- *'The mean for the orange group is higher, so they did better overall.'*

0→ I can explain when the mean is not an appropriate representation of a set of data