

CONTROLLER DOWN. COUNTING
MODE ON.

Mission: Island Stats!

At the fishing festival everything is counted, sorted and stacked. Lots of little marks turn into a graph everyone understands.



Name _____

Date _____



How to practice: one mission a day (15 to 20 minutes) and 5 minutes in the trainer. For the graphs you need a pencil and a ruler.

COUNTING · TALLY MARKS

1

Mark by Mark

At the fishing festival every catch is counted. With tally marks it is quick and you don't lose count.



How tally marks work

Make one mark for each thing. Draw the **5th mark** across the first four: $\text{||||} = 5$. Then you can count in fives: $\text{||||} \text{ ||} = 5 + 5 + 2 = 12$.

A How many marks?

a) $\text{||||} \text{ ||} = \square$

b) $\text{||||} \text{ |||} \text{ ||} = \square$

c) $\text{||||} = \square$

d) $\text{||||} \text{ |||} \text{ |||} = \square$

e) $\text{||||} \text{ |||} = \square$

f) $\text{||||} \text{ |||} \text{ |||} \text{ |||} = \square$

B Draw the tally marks

Number	Tally marks
6	
11	
17	

☐ Mission 1 done

☆ Tally pro

RAW DATA · FREQUENCY TABLE

2

The Big Catch

At the fishing festival Pixel wrote down every catch, one letter per fish. An unsorted list like this is called **raw data**.



H Herring **M** Mackerel **S** Salmon **C** Crab **T** Tuna

H	T	C	H	M	H	S	S	M	H	S	H
H	C	S	C	H	M	T	M	M	S	C	C
S	C	H	H	M	T	H	H	S	M	T	M

A Tally chart and frequency table

Make one mark in the right row for each fish. Then count the marks and write the number. The number is also called the **frequency**.

Fish	Tally marks	Number
H Herring		
M Mackerel		
S Salmon		
C Crab		
T Tuna		
Total		

B Questions about the table

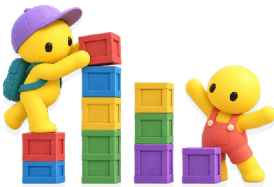
1. Which fish was caught most often?
2. How many more herring than tuna were caught?
3. Which **two** kinds of fish together were caught as often as herring?

DRAWING BAR GRAPHS

3

Build the Bars

A table is exact, but a graph shows at a glance what is biggest. Now you build the bars.

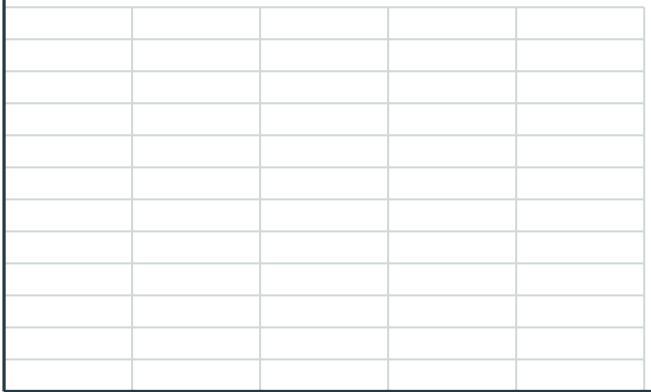


How to draw a bar graph

1. Number the vertical axis (start at 0!). 2. One bar per category, all the same width, with gaps. 3. Label each bar underneath.

A The big catch as a bar graph

Number



1 square = 1 fish.

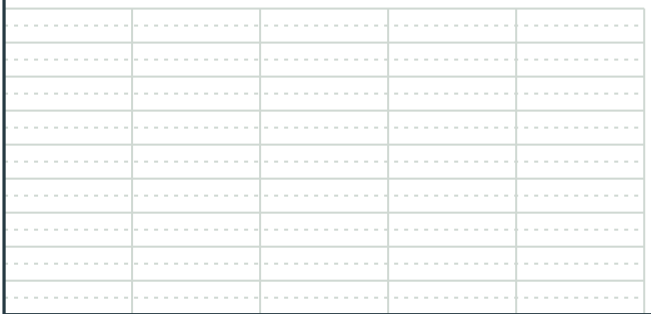
1. Write the numbers 0 to 12 on the vertical axis.
2. Write the kinds of fish under the bars, in the order of the table.
3. Draw the bars.
4. Give the graph a title: _____

B Choose the scale yourself

The grid is only 9 squares tall and the largest value is 80. Which scale fits? 1 square = 1 / 5 / 10 visitors.

Then number the vertical axis, label the horizontal axis with the stands in the order of the table, and draw the bars.

Visitors



Stand	Visitors
Ice cream	60
Pizza	45
Ferris wheel	80
Fishing	35
Stage	70

For 45 and 35, the bars end halfway up a square (at the dashed lines).

☐ Mission 3 done

☆ Bar builder

READING GRAPHS

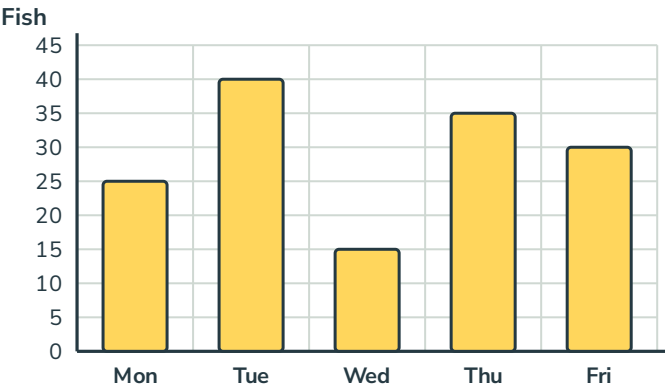
4

Graph Detective

A detective looks closely: what is written on the axis? How much is one square worth?

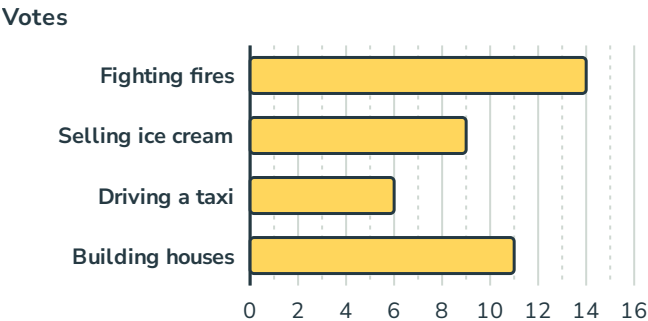


A Bar graph with a scale



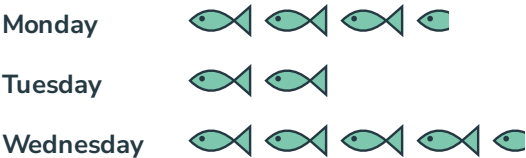
- 1. Catch on Mon:
- 2. Catch on Tue:
- 3. Catch on Wed:
- 4. Catch on Thu:
- 5. Catch on Fri:
- 6. Difference between the best and the worst day:

B Horizontal bar graph: favorite island activity



- 1. Which activity is the most popular?
Fighting fires / Selling ice cream / Driving a taxi / Building houses
- 2. How many votes did “Selling ice cream” get?
- 3. How many more votes did “Building houses” get than “Driving a taxi”?

C Picture graph: one fish picture stands for 10 fish



- 1. Monday:
- 2. Tuesday:
- 3. Wednesday:

EVERYTHING MIXED · LIKE A TEST

5

Test Check

Counting, table, graph: everything once, short and sweet. Then you know what you've got.



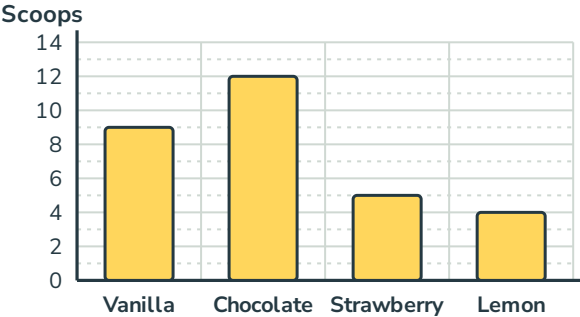
A Raw data: 18 kids name their favorite flavor

☐ Vanilla ☐ Chocolate ☐ Strawberry ☐ Lemon

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Vanilla: Chocolate: Strawberry: Lemon:

B Error detective: one bar is drawn wrong



Flavor	Scoops
Vanilla	9
Chocolate	12
Strawberry	7
Lemon	4

1. Which bar is wrong?

Vanilla / Chocolate / Strawberry / Lemon

2. How many squares tall should it be? (1 square = 2 scoops)

C Traffic light: how sure are you?

Tally marks	☐ got it ☐ almost ☐ practice more
Frequency table	☐ got it ☐ almost ☐ practice more
Drawing bar graphs	☐ got it ☐ almost ☐ practice more
Reading graphs	☐ got it ☐ almost ☐ practice more