Helping With Math

Scaling Picture Graph and Bar Graph

GRADE 3

A picture graph displays data using symbols or pictures to represent the numbers, while a bar graph is a graph that compares amounts of different items using bars.

DESSERTS

The picture graph or a **pictograph** shows data on the number of items or in this case, cupcakes sold on each day by a store.

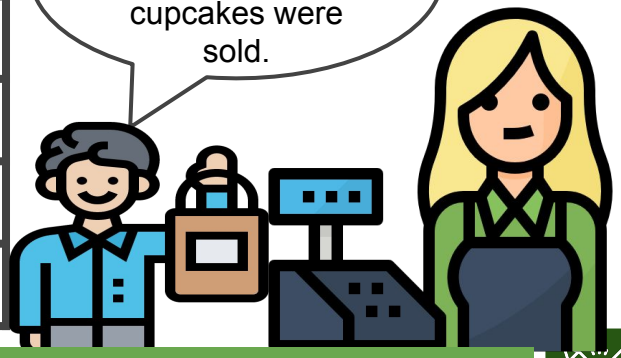
Cupcake Sold Over a Weekdays

Day	Number of Cupcake
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Key: = 4 = 2

The key shows that 1 cupcake is equivalent to 4, which means that the scale of the pictograph is 4. A **scale** implies the number of objects shown by 1 symbol or picture on the graph.

The picture of half cupcake means 2 cupcakes were sold.

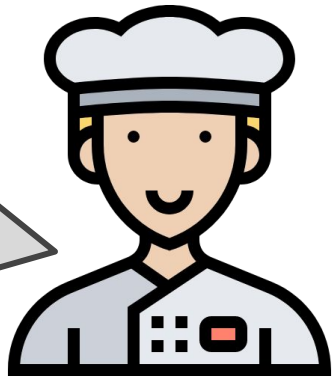


Reading Picture Graph

On the pictograph found in the previous page, there are 3 cupcakes shown on Monday. Each cupcake represents 4 cupcakes, so it will be 3 × 4 = **12** cupcakes sold.

Tuesday 2 × 4 = **8** cupcakes
Wednesday 4 × 4 = **16** cupcakes
Thursday 1 × 4 = **4** cupcakes

On Friday, it shows a picture of 3 and a half cupcake. So,
3 x 4 = **12** cupcakes, then
half cupcake = **2** cupcakes.
Therefore, on Friday
12 + 2 = **14** cupcakes.

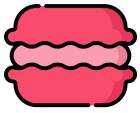


Fun Facts:

- A picture graph is also known as a pictograph or pictogram.
- The discovery of picture graphs dates back to before 3000 BC in Egypt and Mesopotamia.
- The word pictograph originates from the words ‘pict’ (Latin: painted) and ‘graph’ (English: diagram).

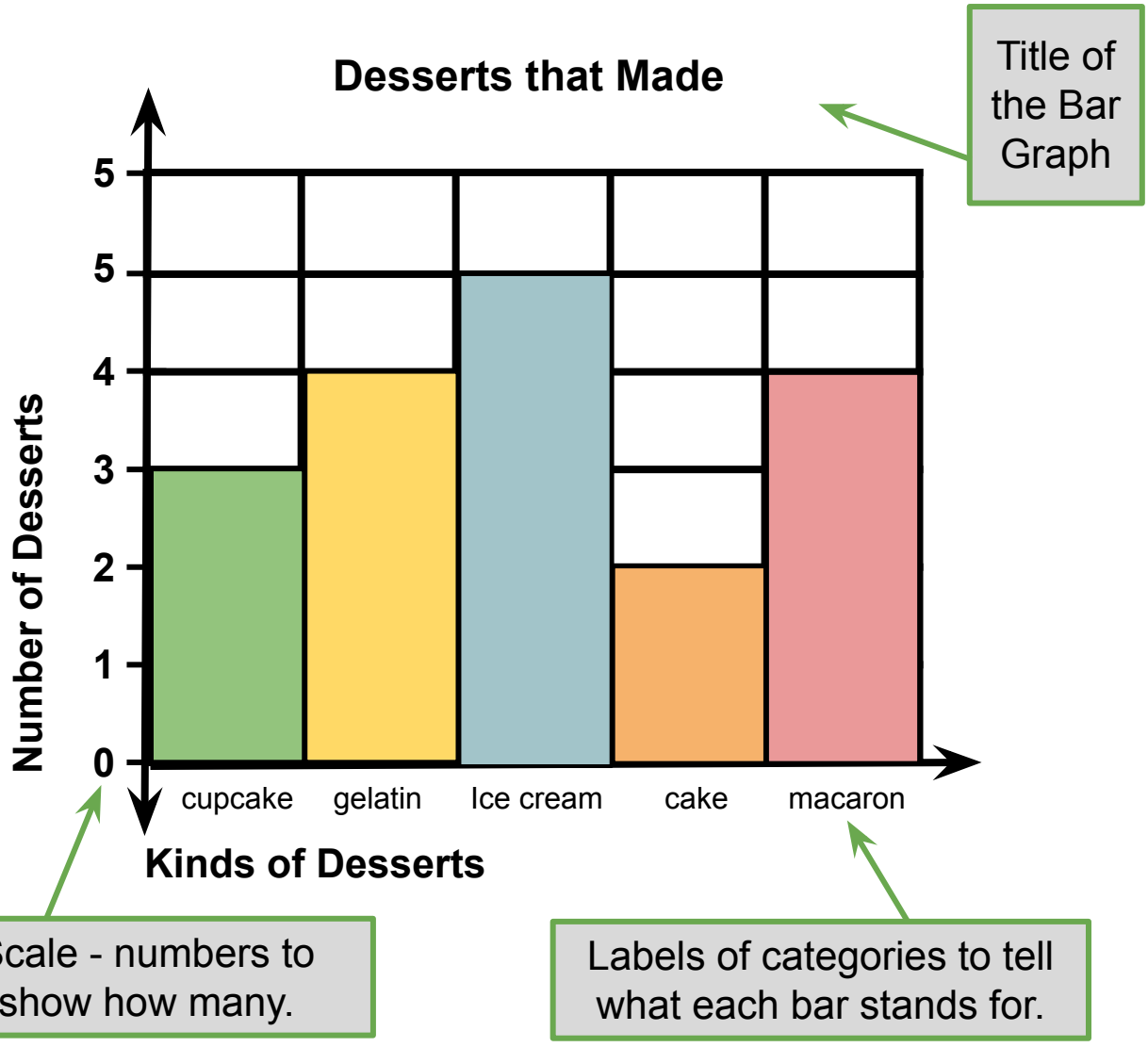
Scaling Bar Graph

Let's take a look at the chart below. Each image represents the number or count of each dessert. Can you tell the total number of desserts each picture represent?

Kinds of Desserts	Number of each desserts
	3
	5
	4
	2
	3

Scaling Bar Graph

Now, this bar graph below shows the different kinds and desserts made. The higher the bar, the higher the number of desserts made.



Fun Facts:

- The bars of a bar graph can be represented both vertically and horizontally.

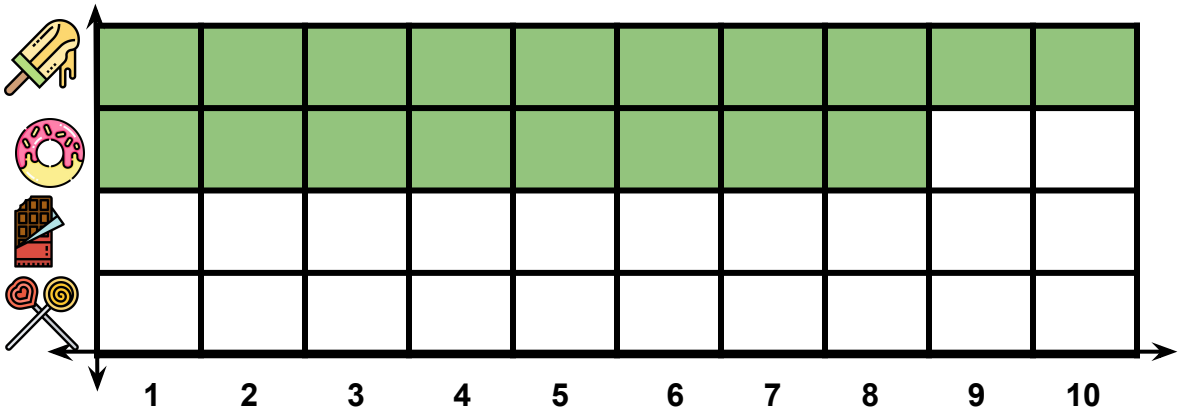
Graphing the Desserts

Tally the number of each dessert. Write the total in the table below.

Key:  = 5  = 4  = 3  = 2

Desserts	Tally	Total
	𝍸 𝍸	10
	𝍸 | | |	
		
		

Color the chart to show the number of desserts (data) and answer the question below.



1. How many  are there ? 10
2. How many  and  are there? _____
3. Which item have the least number? _____
4. Which item have the most number? _____

TABLE OF ACTIVITIES

CAKE TO GO

Chloe loves to make cakes. The graph below shows the number of cakes she made each day in a week. Answer the questions that follow.

Each  **represents 2 cakes.**

MONDAY	3						
TUESDAY	3	1	1				
WEDNESDAY	2						
THURSDAY	3	1	1				
FRIDAY	4	1	1	1	1		
SATURDAY	5	1	1	1	1	1	

1.) How many cakes did Chloe make on Thursday?

2.) Which day were she made most number of cakes? How many cakes were made that day?

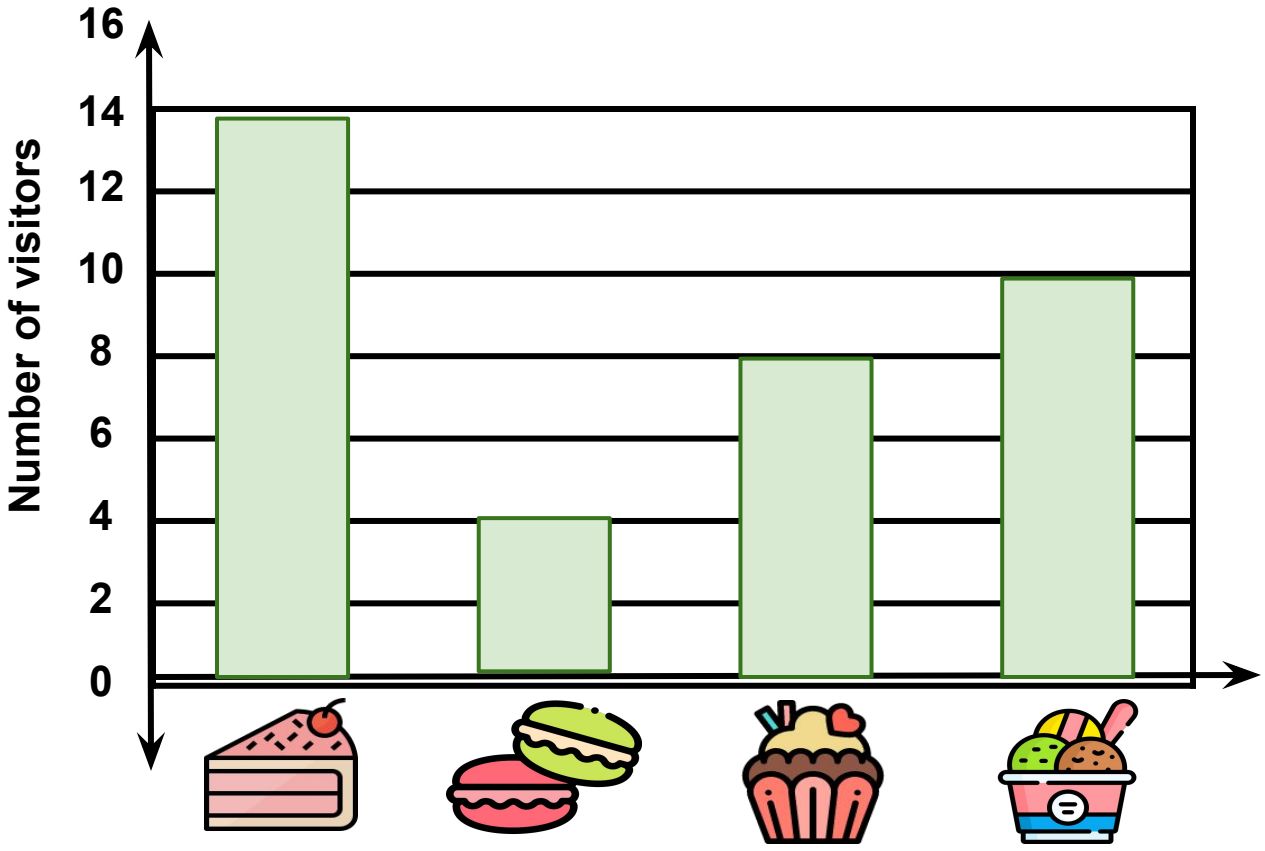
3.) How many more cakes were made on Tuesday than Wednesday?

4.) There were more cakes made on the last two days than the first four days. True or false?

5.) How many cakes did she make that week?

IT'S MY BIRTHDAY

Angel prepared four different desserts for her birthday. The graph shows which dessert is the most liked by her visitors. Study the chart and answer the questions below.



1. How many visitors liked cake? _____

2. Which desserts did the visitors most like? _____

3. Which desserts did the visitors like the least? _____

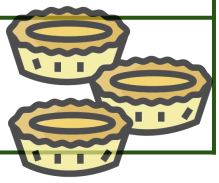
4. How many visitors like ice cream? _____

5. How many visitors like cupcake? _____

HEY FRIENDS

Dennis asked his friends which dessert they liked the most. The pictures below show the desserts they preferred. Use the information to complete the table and answer the questions.

1.) Complete the data table.

5				
				

2.) How many of his friends liked the ice cream the best?

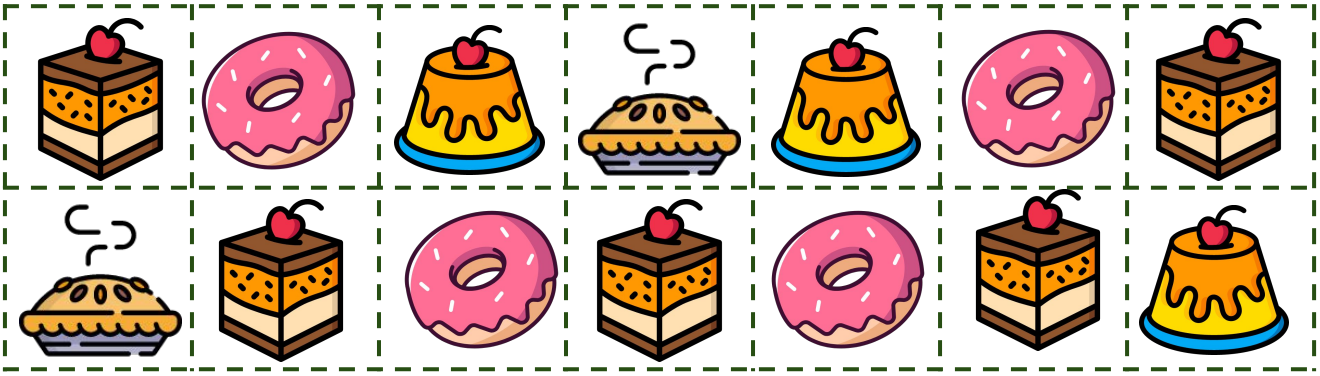
3.) How many preferred the muffin?

4.) How many of his friend liked the tart and the muffin the most?

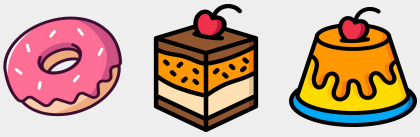
5.) How many more of his friend preferred the chocolate over the cake?

CUT AND PASTE

Max bought desserts in the store. Cut out each dessert and paste it on the graph according to its type. Based on the graph, answer the questions.



1.) Which dessert did Max buy the most?



2.) How many more  than  ?

3.) How many  are there?

SWEET TOOTH

Three girls ordered a dessert in a bakeshop. Analyze the situation and complete the picture graph.

Anna ordered 1  , 1  and 2 

Jasmine ordered 1  , 3  and 1 

Michelle ordered 1  , 2  and 2 

1 2 3 4 5 6

BOY'S TRIP

Four boys are planning to buy desserts for their friends. Their list shows below. Put their faces in the graph to show the number of desserts they are going to buy.

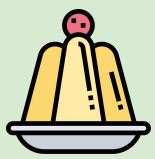
PETER

JOHN

SAM

JAMES

- ❏ **Peter** will buy 2 chocolates, 2 macarons, and 3 cookies.
- ❏ **John** will buy 1 pie, 1 gelatin, 1 chocolate, and 2 cookies.
- ❏ **Sam** will buy 1 pie, 1 chocolate, and 3 macarons.
- ❏ **James** will buy 1 gelatin, 1 pie, 2 cookies, and 2 chocolates.



COUNTING CALORIES

Nicole loves to eat sweets. Count the calories she intake each day. Each dessert refer to counts of calories.

 200 cal

 150 cal

 100 cal

 50 cal

MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						
SATURDAY						
SUNDAY						

1.) How many calories did Nicole intake on Tuesday? _____

2.) What day did Nicole have the highest calorie intake? _____

3.) What days did Nicole have the equal calorie intake? _____

4.) What day did Nicole have the least calorie intake? _____

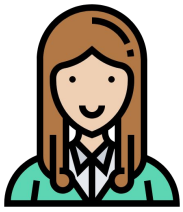
5.) How many calories did Nicole intake on weekend? _____

CUPCAKE CONTEST

There was a cupcake making contest. The graph shows how many cupcakes each contestant made. Use the information given by some contestant to help you complete the table.

 = 6

CONTESTANT	NUMBER OF CUPCAKES
Sarah	
Pam	
Daniel	
Jacob	
Jane	
Andrea	



Pam had 12 more cupcakes than Sarah.

Jacob had double the number of cupcakes that Jane had.

Andrea had half of the number of cupcakes than Daniel.

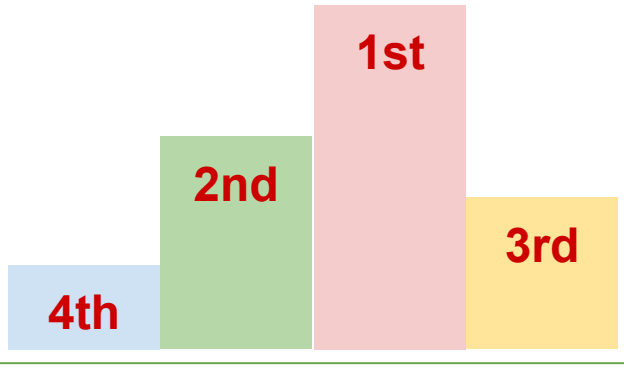
ICE ICE BABY I

The ice cream vendor made an inventory of his sales. The graph shows the number of ice cream that were eaten each day on weekdays.

 = 10

ICE CREAM FLAVORS	MONDAY	TUESDAY	WEDNES-DAY	THURSDAY	FRIDAY
Vanilla					
Strawberry					
Chocolate					
Cheese					

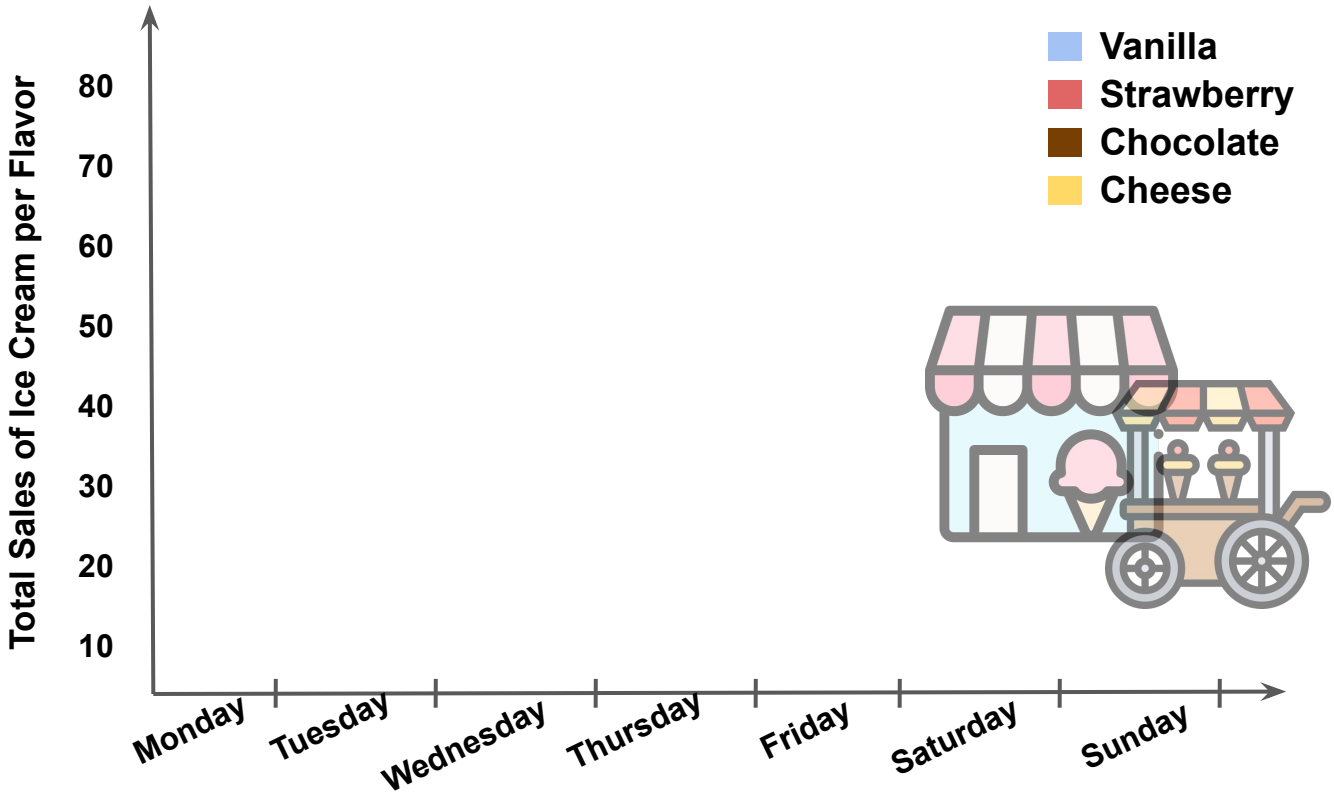
Rank each flavor according to which is the most eaten. 1 being the most favorite and 4 being the least.



Create a bar graph showing the inventory of sales of chocolate ice cream within the weekdays.

ICE ICE BABY II

Using the previous chart, create a bar graph showing the inventory sales of ice cream in a week per flavor. Use the given color code.



1. Which flavor was the most choice?
2. Which flavor was the least choice?
3. How many sales in vanilla and strawberry ice creams?
4. What day had the most sales of cheese ice cream?

ANSWER GUIDE

Activity 1

1.) 8
2.) Saturday, 14
3.) 6
4.) No
5.) 54

Activity 2

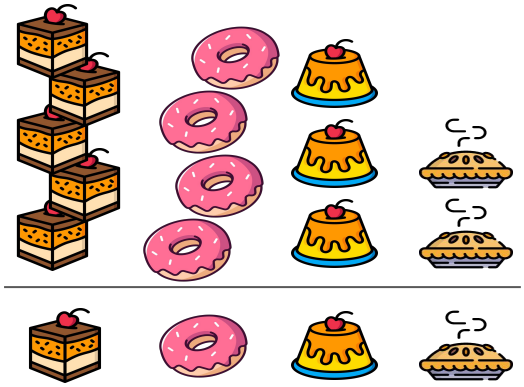
1.) 14
2.) cake
3.) macaron
4.) 10
5.) 8

Activity 3

1.) chocolate - 5
cake - 3
ice cream - 4
muffin - 2
tart - 2

2.) 4
3.) 2
4.) 4
5.) 2

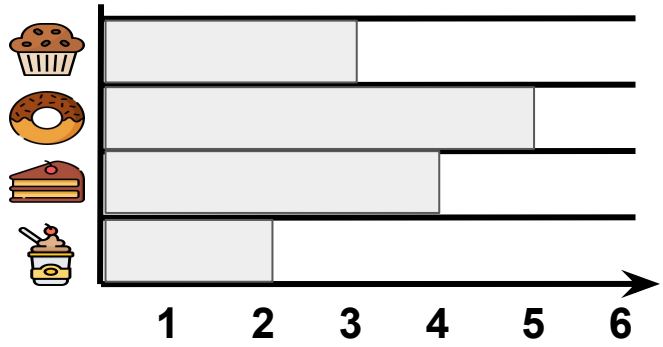
Activity 4



1.) cake
2.) 3
3.) 4

ANSWER GUIDE

Activity 5



Activity 6

John, Sam, James

Peter, Peter, John, Sam, James, James

Peter, Peter, Sam, Sam, Sam

Peter, Peter, Peter, John, John, James, James

John, James

Activity 7

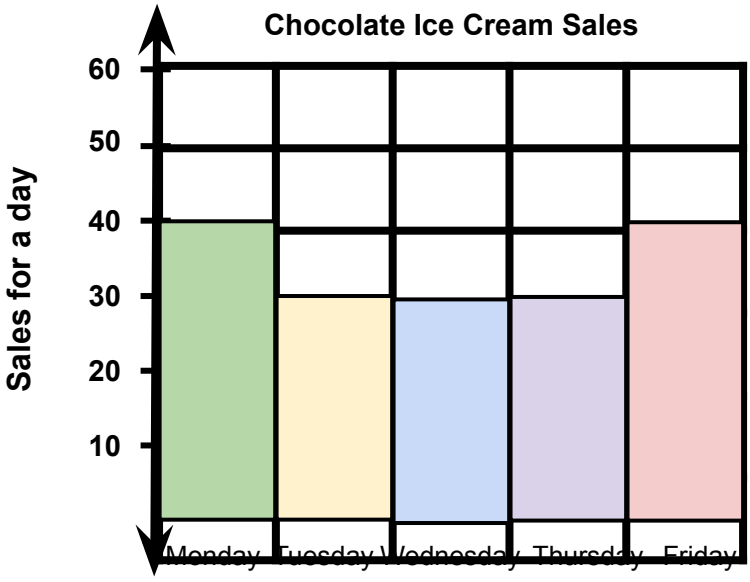
1.) 500
2.) Wednesday
3.) Monday and Friday
4.) Thursday
5.) 750

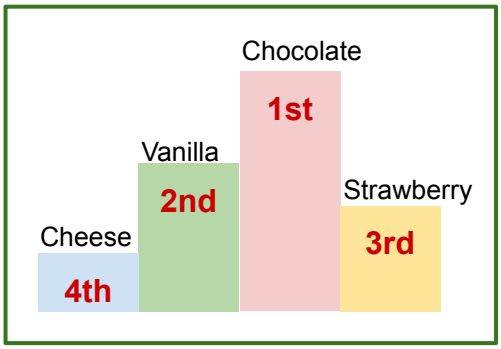
Activity 8

CONTESTANT	NUMBER OF CUPCAKES
Sarah	4
Pam	6
Daniel	3
Jacob	5
Jane	3
Andrea	2

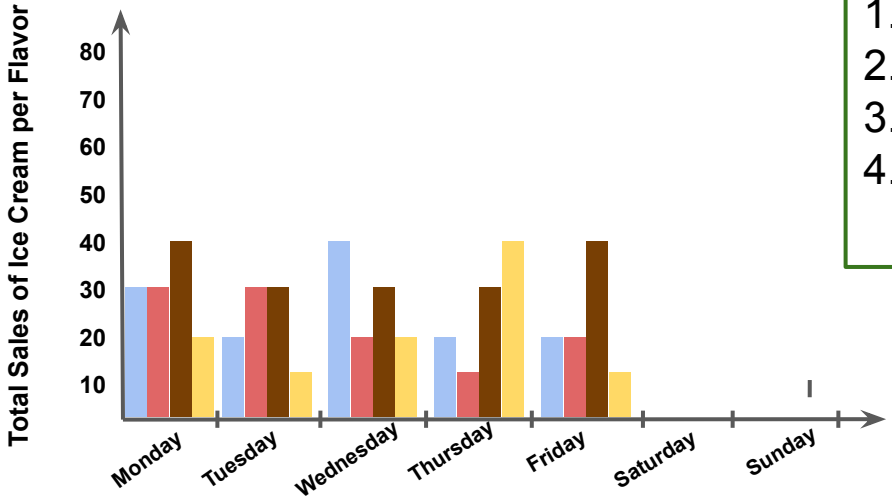
ANSWER GUIDE

Activity 9





Activity 10



1.) Chocolate
2.) Cheese
3.) 240
4.) Thursday

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