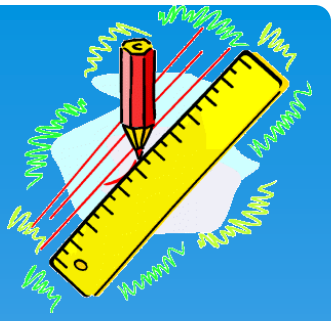
STARTER QUESTIONS



Q1. Convert to 12 hr clock 20 23 05 32

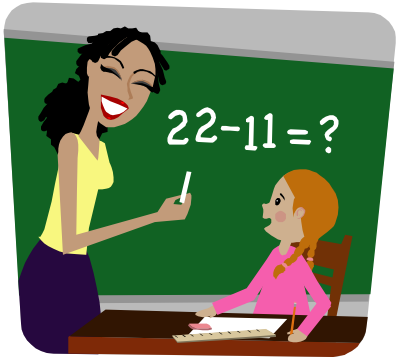
Q2. Round to 1 decimal place 0.657

Q3. How many minutes in a day

Q4. Find the time difference between 16 29 and 22 17

Learning Objective

Revision:
Predict outcomes from data using the language of chance and likelihood.



Probability. What are the chances of that?

Certain	Something will definitely happen.
Likely	Something will probably happen, but it is not certain.
50:50 Chance	Something has exactly half a chance of happening.
Unlikely	Something is unlikely. It has more chance of not happening.
Impossible	Something will never happen.

Probability is all to do with how likely, or unlikely events are to happen. *Click on the words to see what they mean.*

Click on the statements to watch them being placed on the probability line

It will snow in May

2012 is a leap year

Year 5 will get homework

It will rain in April

The sun rises in the west

Burnley win the FA Cup

The moon orbits Earth

Xmas will be in March

Pick red card from a deck

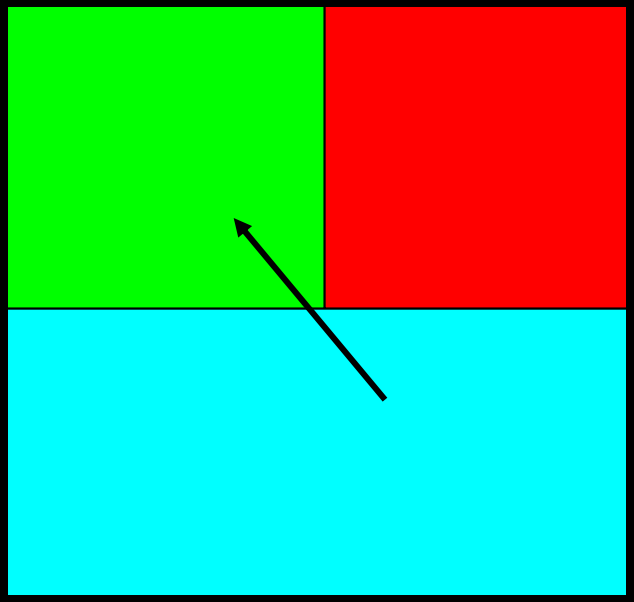
A coin lands on heads

Certain	Likely	50:50 Chance	Unlikely	Impossible

Probability Number Line

- Rolling 7 on an ordinary 6 sided dice
- Choosing one Year Group in a Junior School (Years 3 to 6)
- Rolling an odd number on a dice
- Choosing a red counter from a bag that has 6 red and 2 blue counters in it.
- Choosing any card other than an Ace from a pack of cards

Probability Spinners

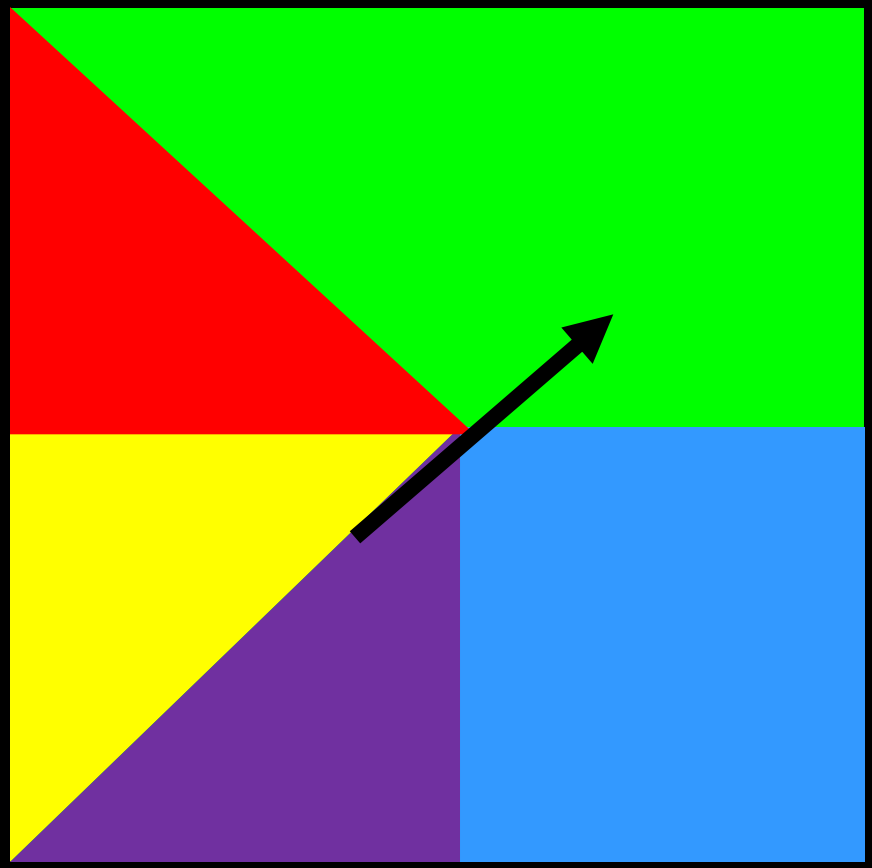


There is a $\frac{1}{4}$ (25%) chance of the spinner landing on red.

There is a $\frac{1}{2}$ (50%) chance of the spinner landing on blue.

There is a $\frac{1}{4}$ (25%) chance of the spinner landing on green.

Click on the colour to find out the probability of the spinner landing on it.



There is a $\frac{1}{4}$ chance (25%) of the spinner landing on blue.

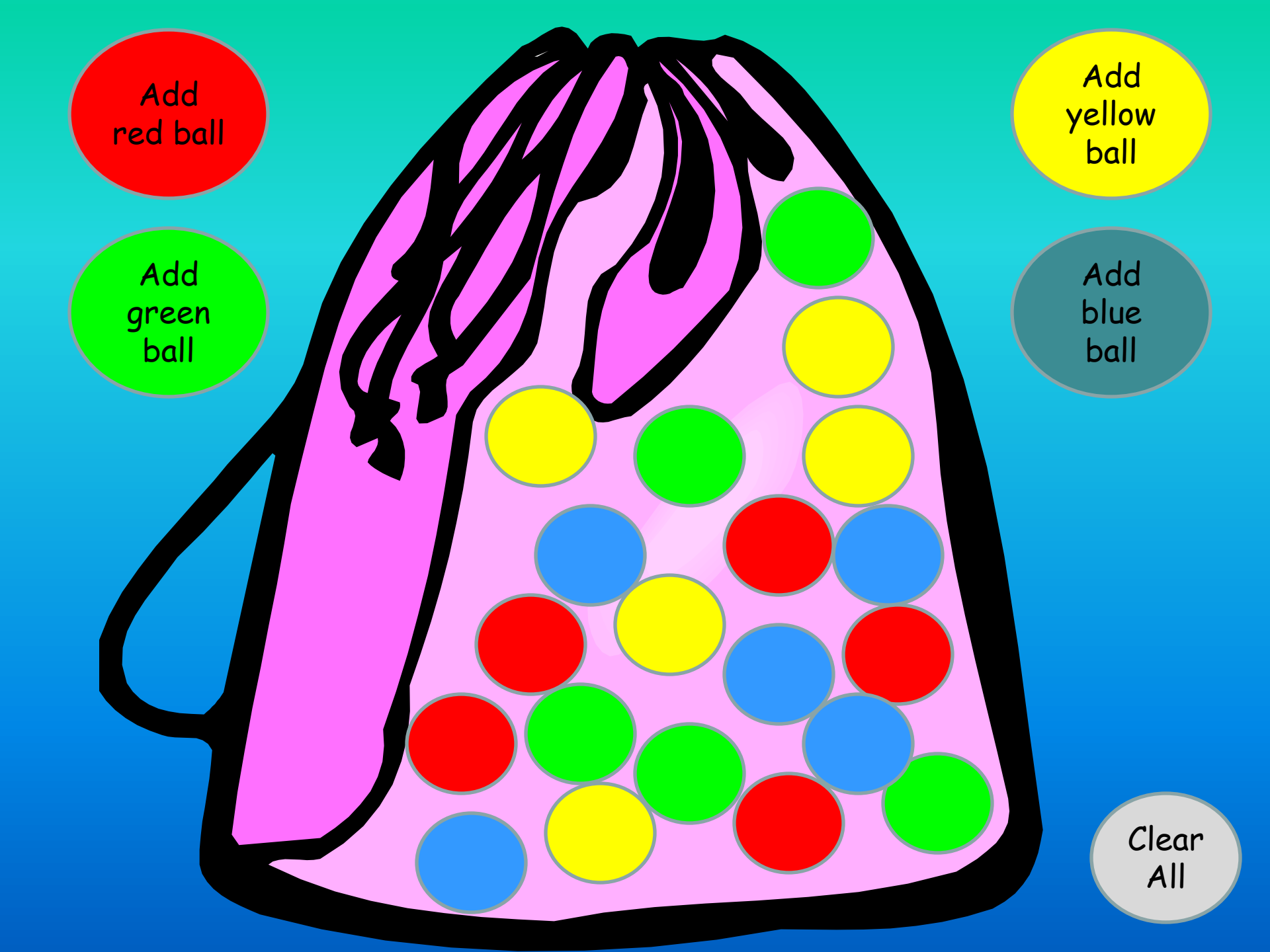
There is a 1/8 chance (12.5%) of the spinner landing on yellow.

There is a 1/8 chance (12.5%) of the spinner landing on red.

There is a 3/8 (37.5%) chance of the spinner landing on green.

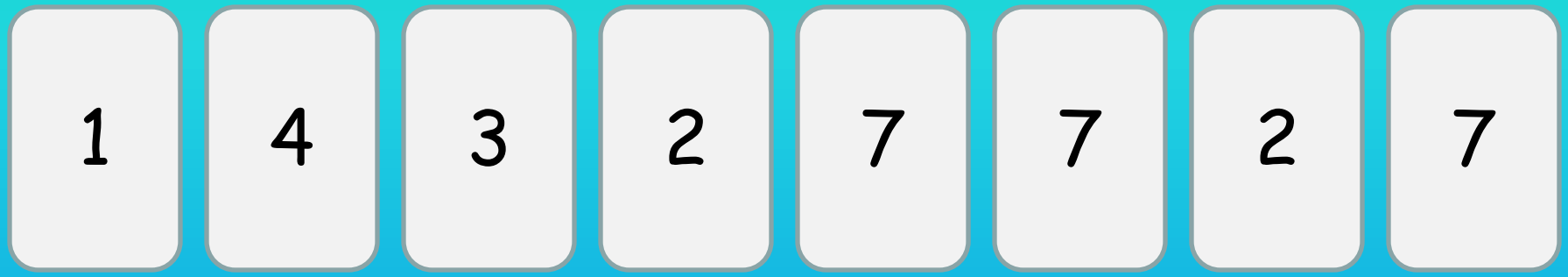
There is a 1/8 chance (12.5%) of the spinner landing on purple.

Click on the colour to find out the probability of the spinner landing on it.


Add red ball
Add green ball
Add yellow ball
Add blue ball
Clear All

Probability Number Cards.

Massimo has eight number cards in his hands. This is what he has:



Which number is most likely to come up?

Reveal Answer

7

Is it more likely to pick an even or odd number?

Reveal Answer

Odd (5/8)

What are the chances of picking 2?

Reveal Answer

$\frac{1}{4}$ chance

What are the chances of picking 1 or 3?

Reveal Answer

$\frac{1}{4}$ chance

Reveal the Card

Click on the card to reveal what it is

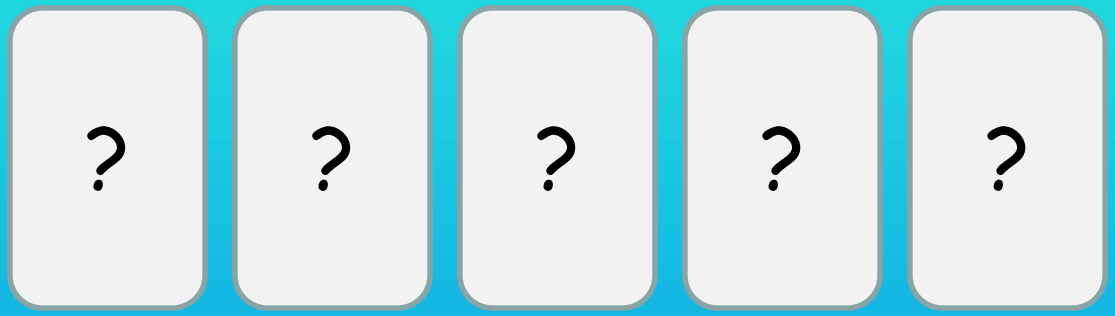
✓There is a $\frac{1}{2}$ chance the number is odd

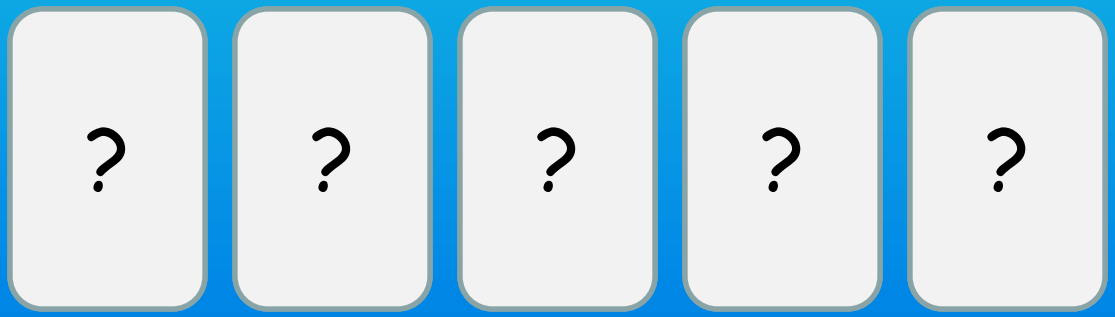
✓There is 1/10 chance the card is 2

✓It is twice as likely to pick a 4 than a 2.

✓There is 1/5 chance of picking an 8.

✓There is a 7/10 chance of picking a number 5 or more.





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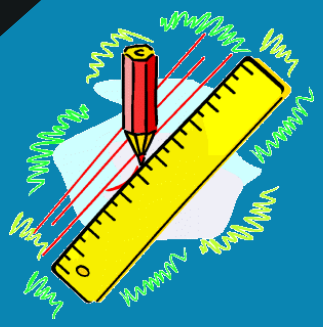
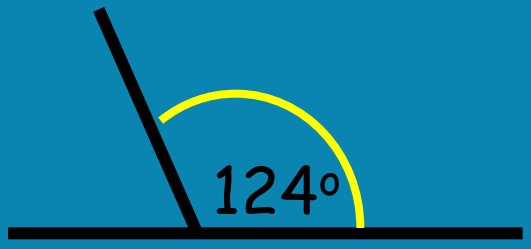
STARTER QUESTIONS



1. Find the missing angle



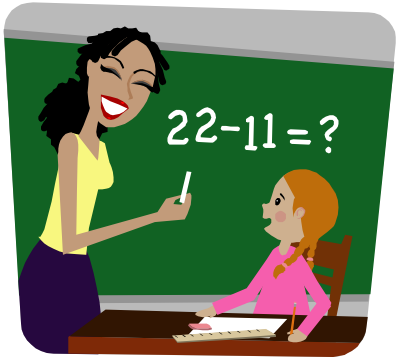
2. 3 cans of juice cost £2.40.
   How much for 2 cans.

3. $78 \div 10$

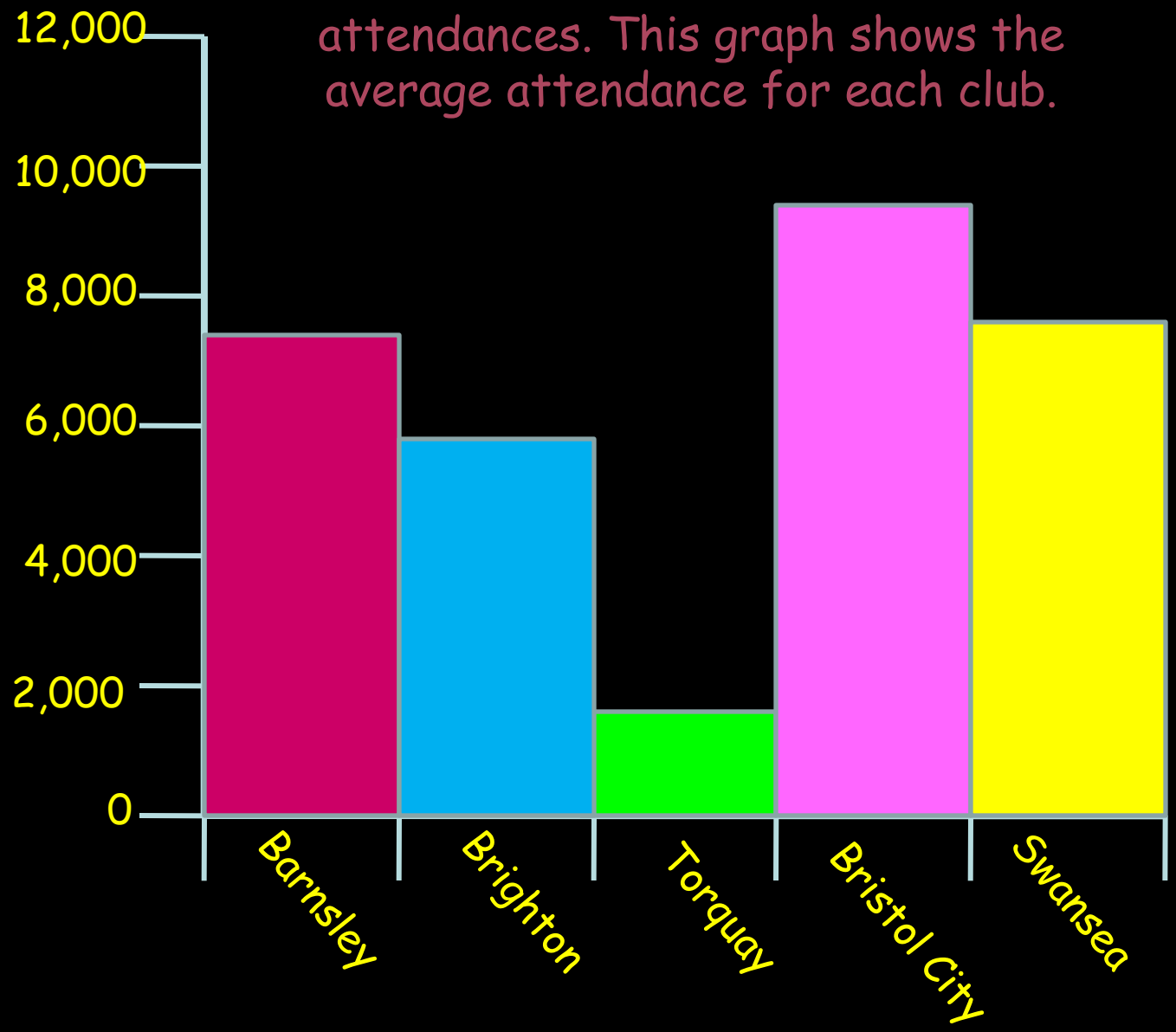
4. Find 2 numbers that add to 20 and divide to give 1.

Learning Objective

Revision:
Interpreting Bar Charts



Different football clubs have different attendances. This graph shows the average attendance for each club.



Approximately, how many people watched Swansea?

7,900

Reveal Answer

How many more people watched Bristol City than Brighton?

2,800 approx

Reveal Answer

Which club had about 7,300 watching them?

Barnsley

Reveal Answer

How many people watch Torquay?

1,800 approx

Reveal Answer

CLICK!

Data

Data is **information**

Data handling is when we organise, display and try to understand information.

Some children wanted to find out about the length of songs. They wanted to know how long most songs were.

They listened to some songs and timed how long each one lasted

Here are their results:

- 3min 20 seconds
- 2 min 58 seconds
- 3 min 12 seconds
- 1 min 59 seconds
- 4 min 03 seconds
- 2 min 15 seconds
- 3 min 32 seconds
- 3min 37 seconds
- 3 min 58 seconds
- 1 min 45 seconds
- 3 min 0 seconds
- 3 min 13 seconds
- 2 min 35 seconds
- 3 min 17 seconds

Not very easy to understand is it?

Let’s turn it into a graph...

Graph showing how many songs there were [illegible]th

Every song is different...

So how can we find out what sort of length is most common?

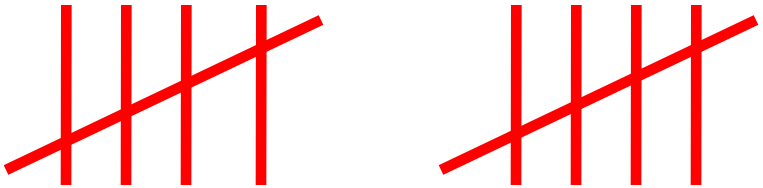
We can group the data

We'll start by sorting it into a tally chart

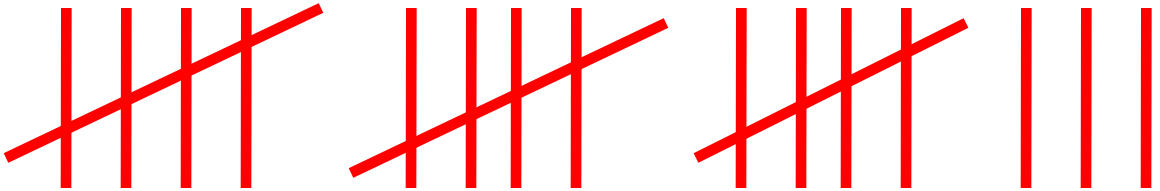
- 3min 20 seconds
- 2 min 58 seconds
- 3 min 12 seconds
- 1 min 59 seconds
- 4 min 03 seconds
- 2 min 15 seconds
- 3 min 32 seconds
- 3min 37 seconds
- 3 min 58 seconds
- 1 min 45 seconds
- 3 min 0 seconds
- 3 min 13 seconds
- 2 min 35 seconds
- 3 min 17 seconds

Song length	Number of songs
1 min 30 sec to 1 min 59 sec	II
2 min 0 sec to 2 min 29 sec	I
2 min 30 sec to 2 min 59 sec	II
3 min 0 sec to 3 min 29 sec	IIII
3 min 30 sec to 3 min 59 sec	III
4 min 0 sec to 4 min 29 sec	I
4 min 30 sec to 4 min 59 sec	

Remember how we tally in fives:



So how many does this tally show?



18

Right, let’s get back to that tally chart...

... and change it into a **frequency table**

Tally chart

Song length	Number of songs
1 min 30 sec to 1 min 59 sec	II
2 min 0 sec to 2 min 29 sec	I
2 min 30 sec to 2 min 59 sec	II
3 min 0 sec to 3 min 29 sec	𝍸
3 min 30 sec to 3 min 59 sec	III
4 min 0 sec to 4 min 29 sec	I
4 min 30 sec to 4 min 59 sec	

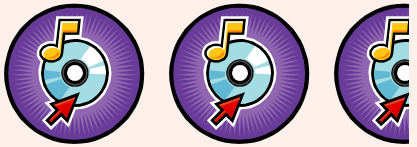
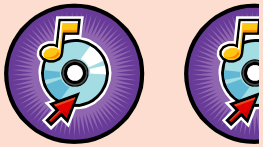
Frequency table

Song length	Number of songs
1 min 30 sec to 1 min 59 sec	2
2 min 0 sec to 2 min 29 sec	1
2 min 30 sec to 2 min 59 sec	2
3 min 0 sec to 3 min 29 sec	5
3 min 30 sec to 3 min 59 sec	3
4 min 0 sec to 4 min 29 sec	1
4 min 30 sec to 4 min 59 sec	

Well, that bit was easy!

Now let’s display the information in a pictogram

We’re going to use one CD to stand for 2 songs, like this:

Song length	Number of songs
1 min 30 sec to 1 min 59 sec	2
2 min 0 sec to 2 min 29 sec	1
2 min 30 sec to 2 min 59 sec	2
3 min 0 sec to 3 min 29 sec	5 
3 min 30 sec to 3 min 59 sec	3 
4 min 0 sec to 4 min 29 sec	1

Now we can use those symbols to make a pictogram

Song length

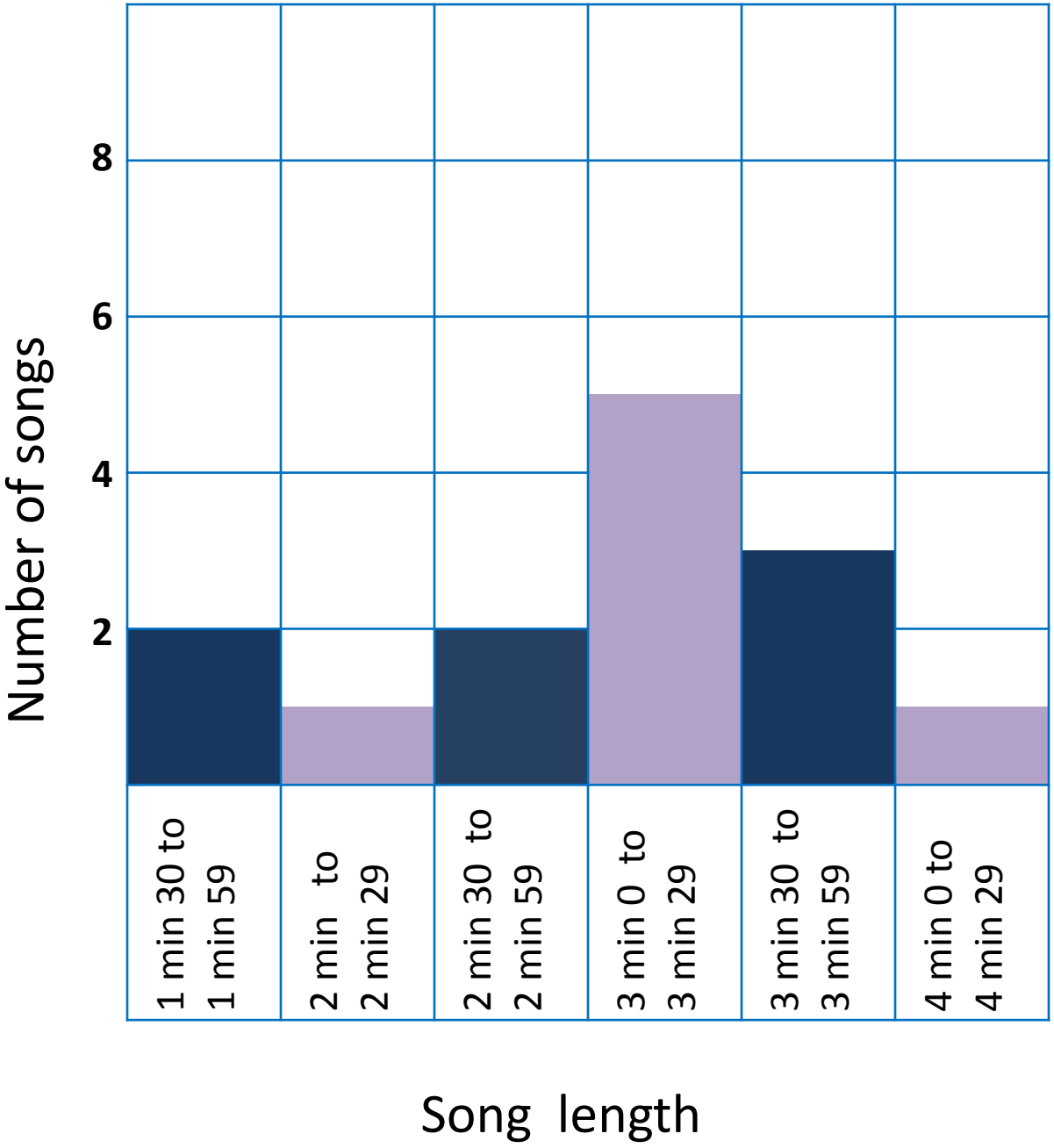
1 min 30 sec to 1 min 59 sec	
2 min 0 sec to 2 min 29 sec	
2 min 30 sec to 2 min 59 sec	
3 min 0 s 3 min 29 se	
3 min 30 s 3 min 59 se	
4 min 0 sec to 4 min 29 sec	

What else do we need?

Number of songs

= 2 songs

Which length of song is the most common?

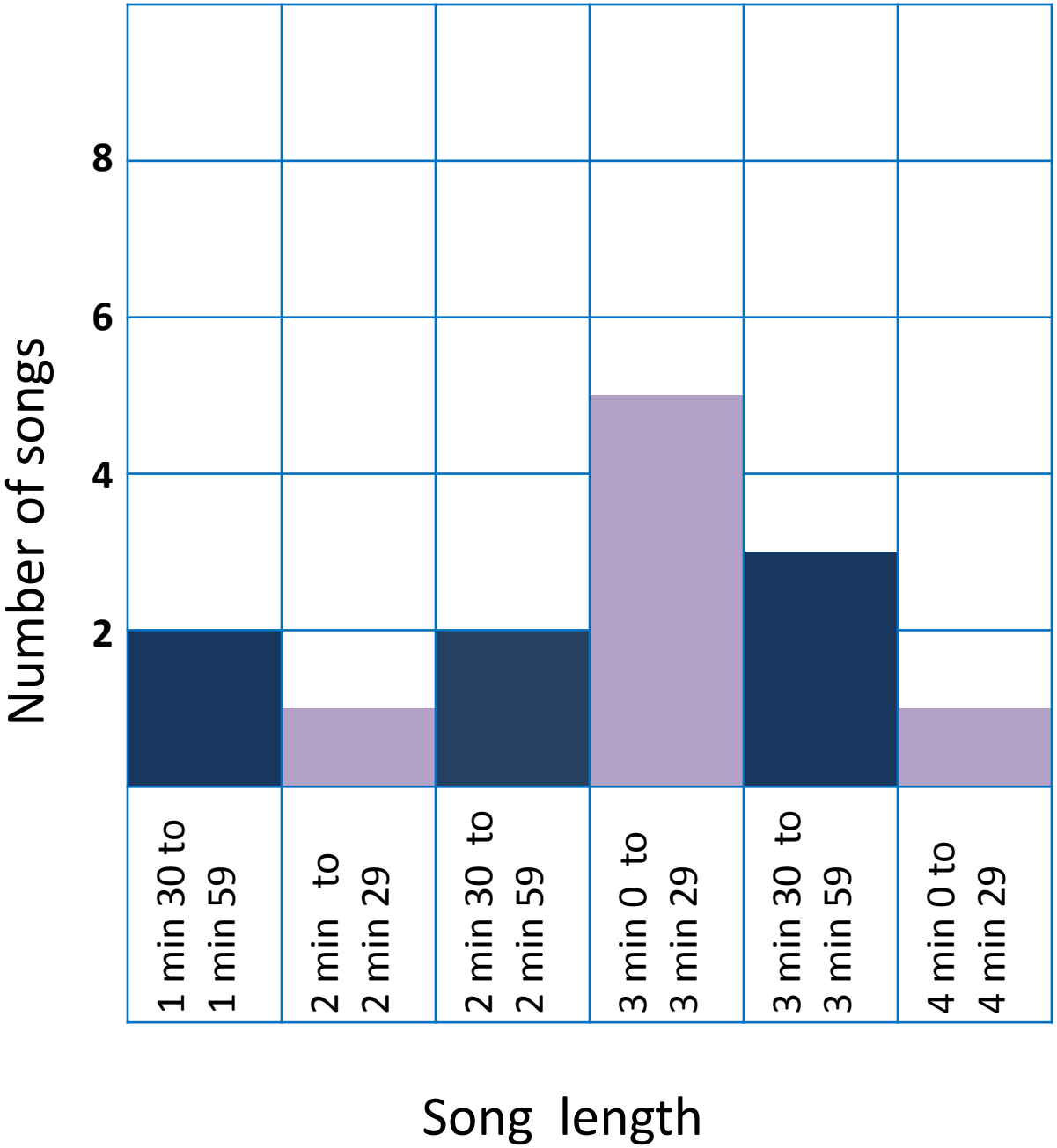


This is called the **mode**

True or false?

Most songs are between 3 and 4 minutes long.

True



Grouping data

When you group data, you have to make all the groups **equal.**

In this example, all the groups were 30 seconds long.

The same rule applies to any grouped data.

If we were grouping tables test scores, we could use:

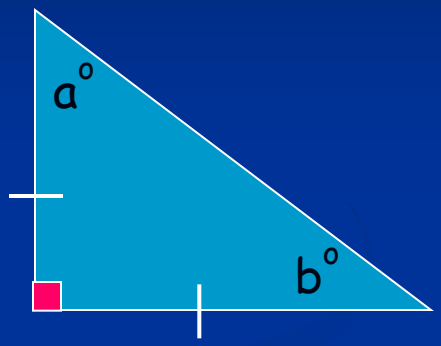
0-10, 11-20, 21-30, 31-40 and so on.

STARTER QUESTIONS

Q1. Solve the equation below

$$x + 21 = 32$$

Q2. Find all the missing angles



Q3. Find the average of the numbers below

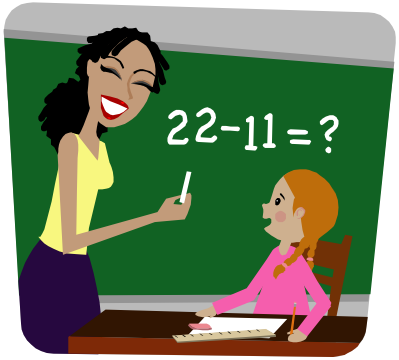
2,5,6,7,5,2,2,5,6,7,5,8

Q4. Find

30% of £240

Learning Objective

Revision:
Plot information on a line graph.
Interpret data using a line graph.



Creating a Graph

Here is some information that will need a different type of graph

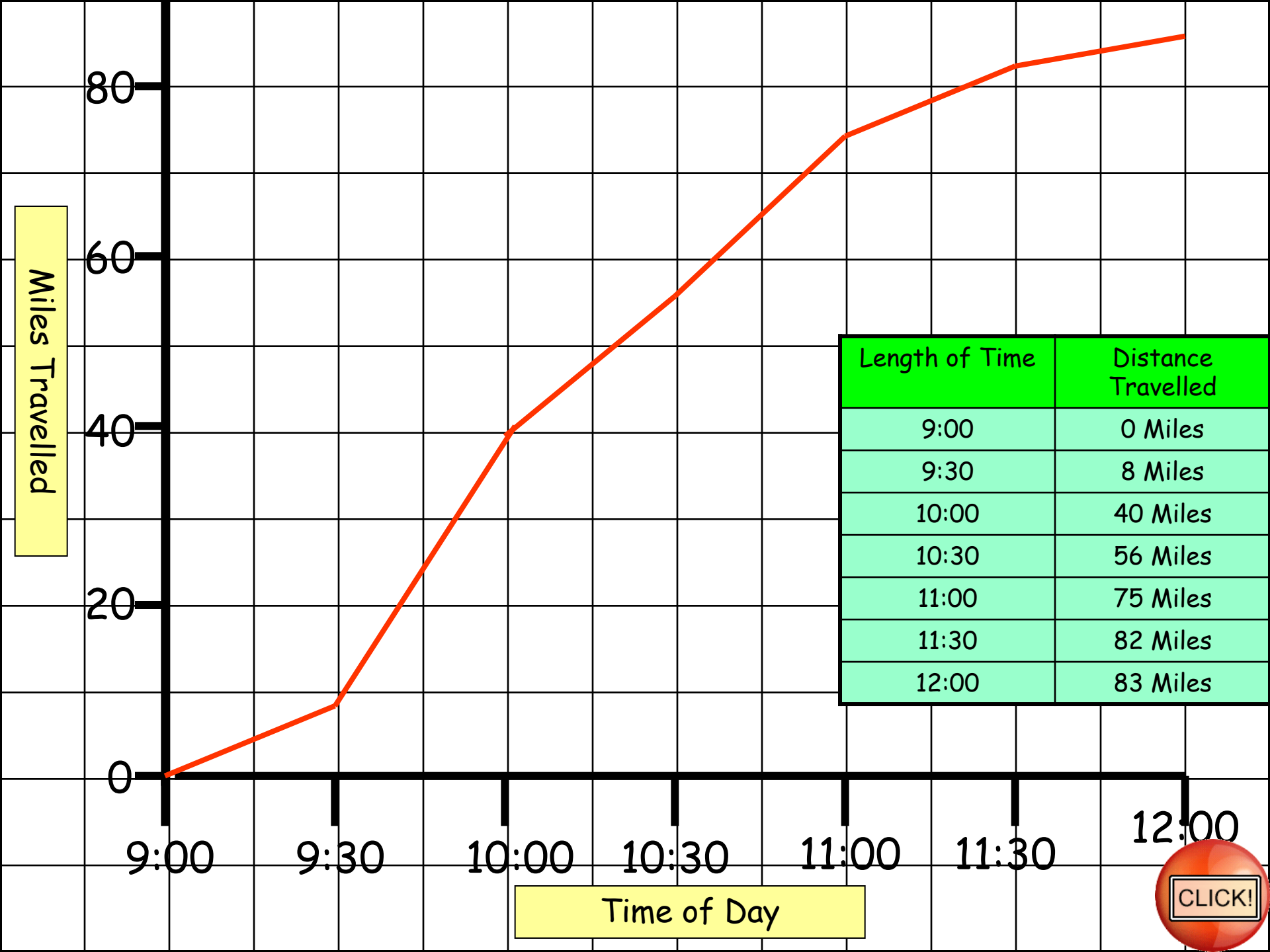
Length of Time	Distance Travelled
9:00	0 Miles
9:30	8 Miles
10:00	40 Miles
10:30	55 Miles
11:00	80 Miles
11:30	82 Miles

As this couple have two sets of numbers the best graph to draw is a **line graph**. This will help us to find out where we were at times like 10:45 too!

Go to the next slide to see the graph.

We timed the journey to our holiday destination. Here are our results:

CLICK!



Length of Time	Distance Travelled
9:00	0 Miles
9:30	8 Miles
10:00	40 Miles
10:30	56 Miles
11:00	75 Miles
11:30	82 Miles
12:00	83 Miles

CLICK!

Creating a Graph

Here is some more information

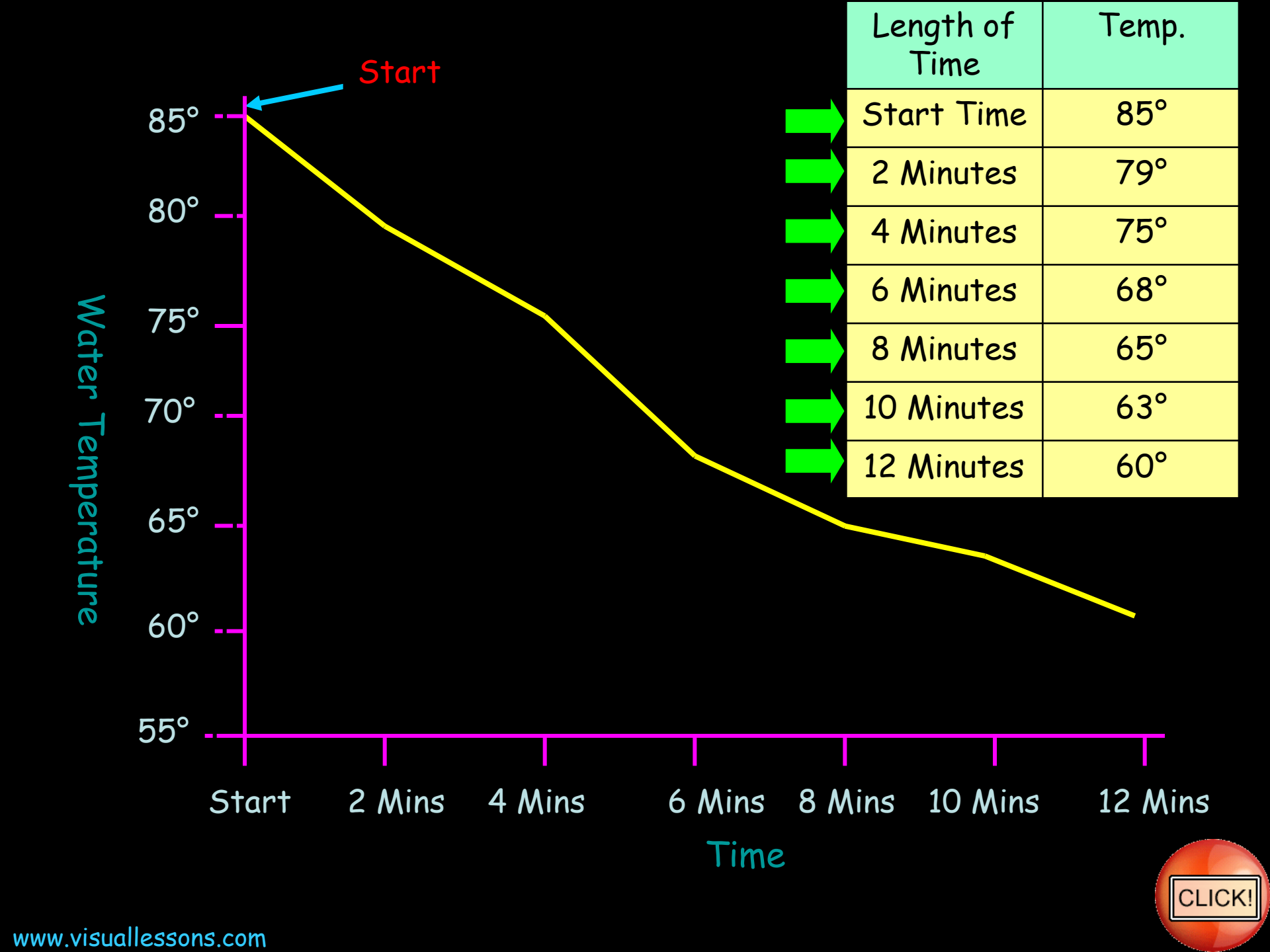
Length of Time	Temperature
Start Time	85°
2 Minutes	79°
4 Minutes	75°
6 Minutes	68°
8 Minutes	65°
10 Minutes	63°
12 Minutes	60°

As this girl has two sets of numbers the best graph to draw is a **line graph**. This will help us read the temperature for the 'odd number' minutes too!

Go to the next slide to see the graph.

I timed how long it would take for the ice cubes to melt. Here are my results:

CLICK!



Length of Time	Temp.
Start Time	85°
2 Minutes	79°
4 Minutes	75°
6 Minutes	68°
8 Minutes	65°
10 Minutes	63°
12 Minutes	60°

CLICK!

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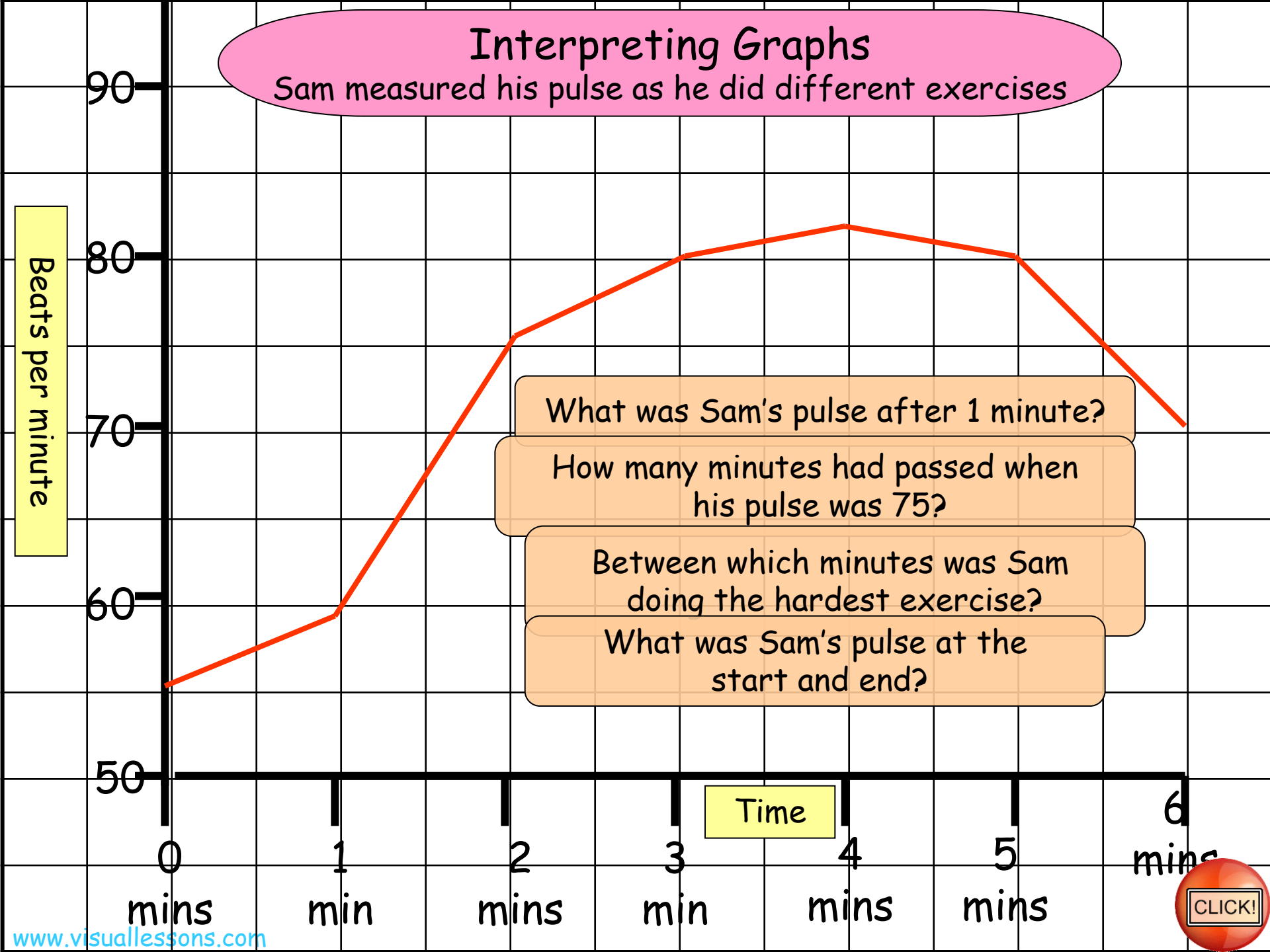
Interpreting Graphs

Sam measured his pulse as he did different exercises



What was Sam's pulse after 1 minute?

How many minutes had passed when his pulse was 75?

Between which minutes was Sam doing the hardest exercise?

What was Sam's pulse at the start and end?

CLICK!

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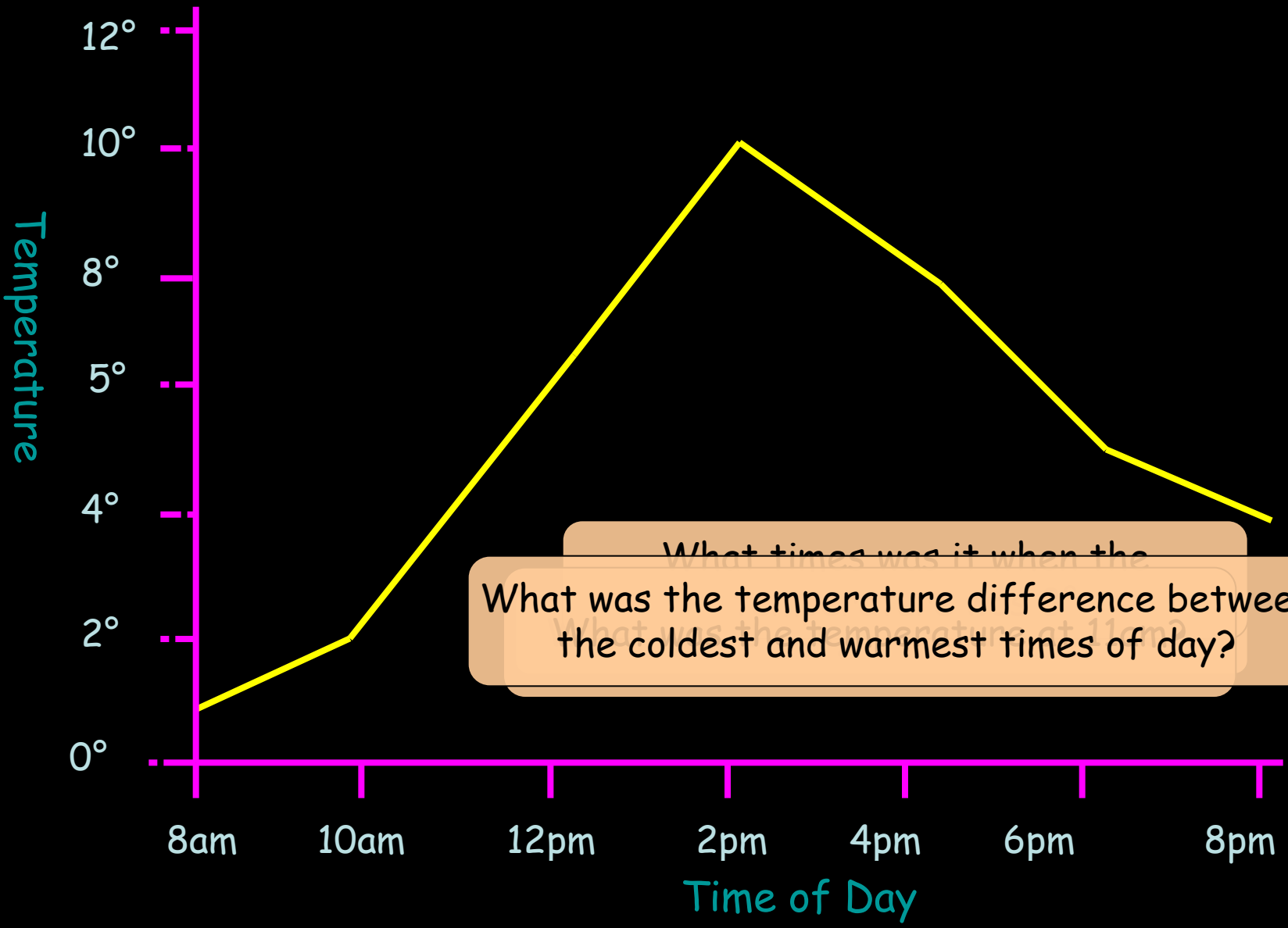
Interpreting Graphs

Georgia measured the temperature outside for a day.



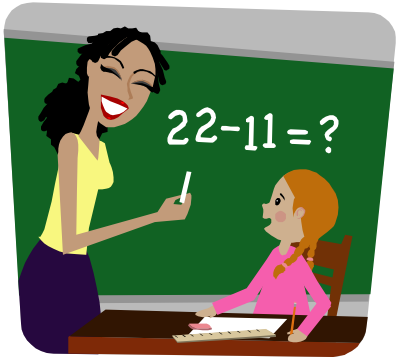
What was the temperature difference between the coldest and warmest times of day?

CLICK!

YOUR TASK!

Medal Maths Page 90: Line Graphs

5/8/2017

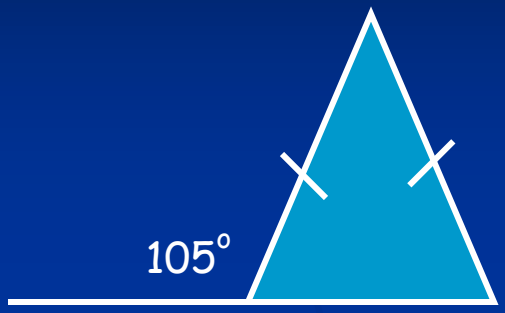


STARTER QUESTIONS

Q1. Calculate

$$540 \div 9$$

Q2. Find all the missing angles



Q3. List the prime numbers between 50 and 60

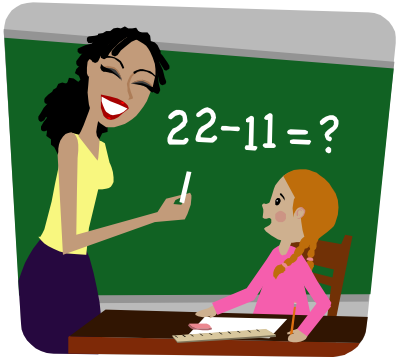
Q4. Find

15% of £400

Learning Objective

Revision:

Interpret and compare pie charts.



Pie Charts

Pets	Number of Children
Dogs	8
Cats	7
Rabbits	3
Fish	2
Other	5

Show Pie Chart

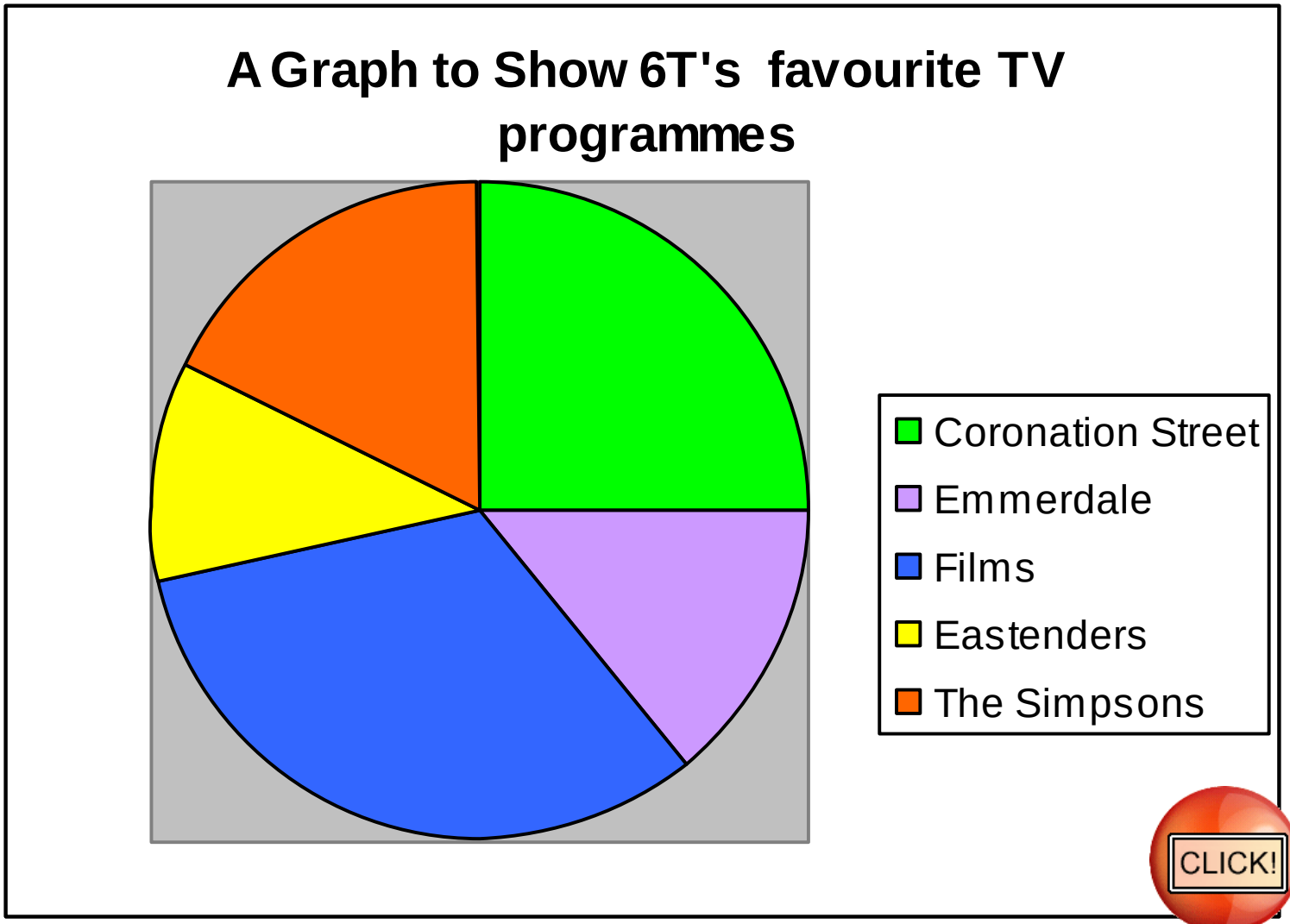
I asked my class of 25 children what their favourite pet was. Here are their results:

A pie chart to show Year 's 6's favourite TV programmes

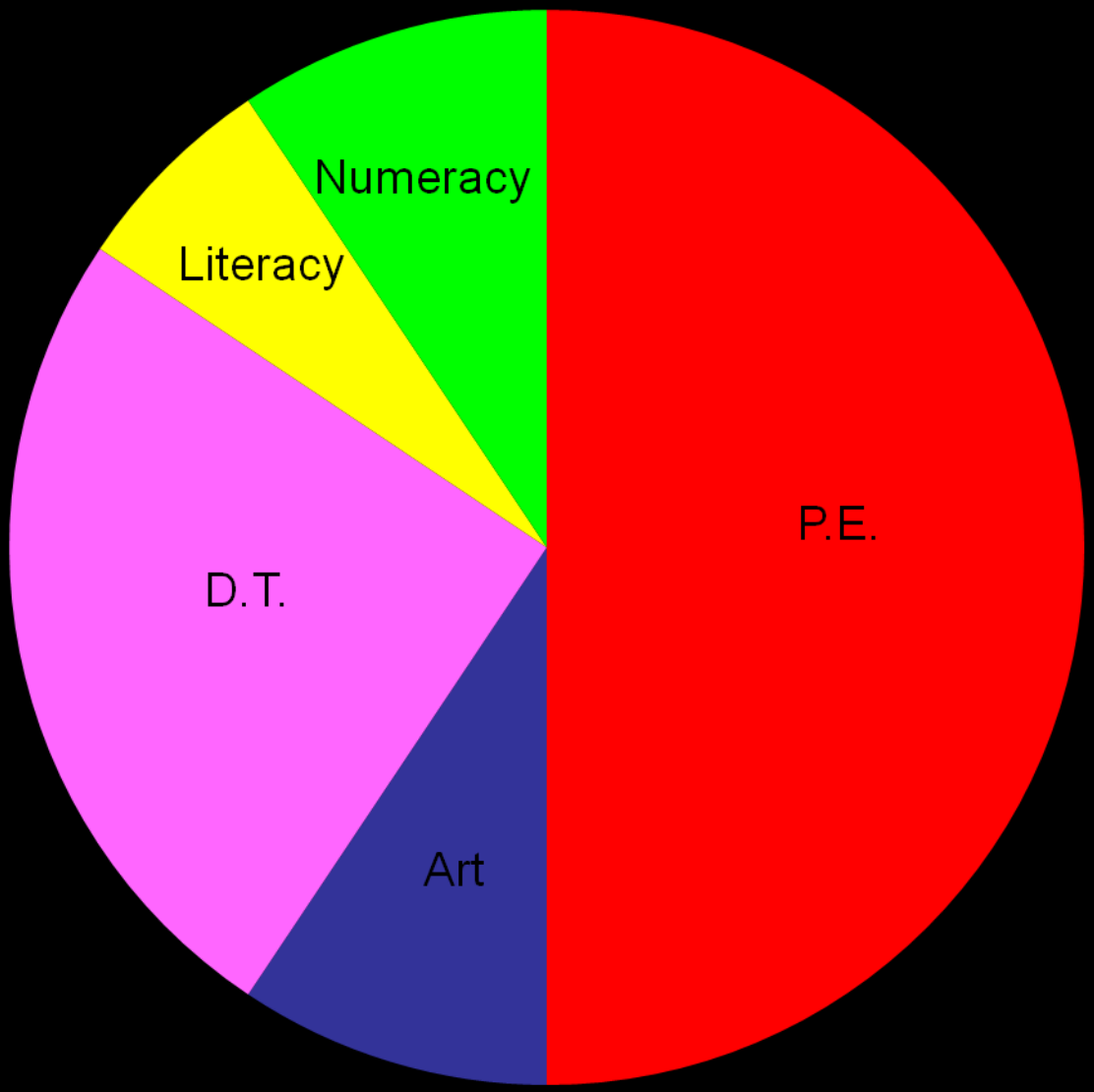
If 8 children liked Coronation Street, estimate how many children like Emmerdale?

How many children are in Year 6 ?

Estimate how many children like watching films.



Questions Based on a Pie Chart:
Favourite Subjects



Which subject is the least popular?

Reveal Answer

Literacy

16 children like P.E. How many children like D.T.?

Reveal Answer

8 children

Estimate how many children like Art.

Reveal Answer

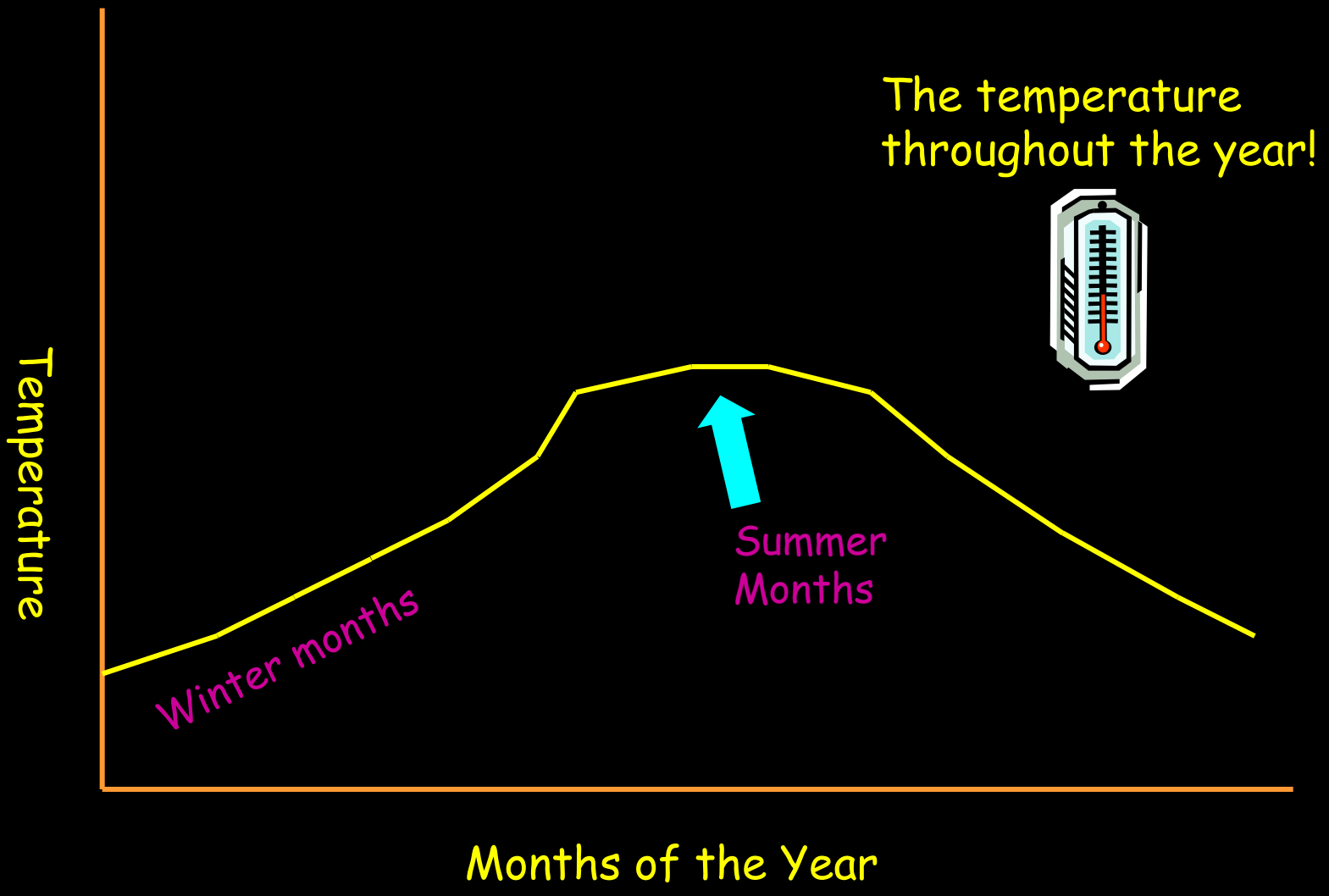
2-4 children

How many children are in the class?

Reveal Answer

32 children

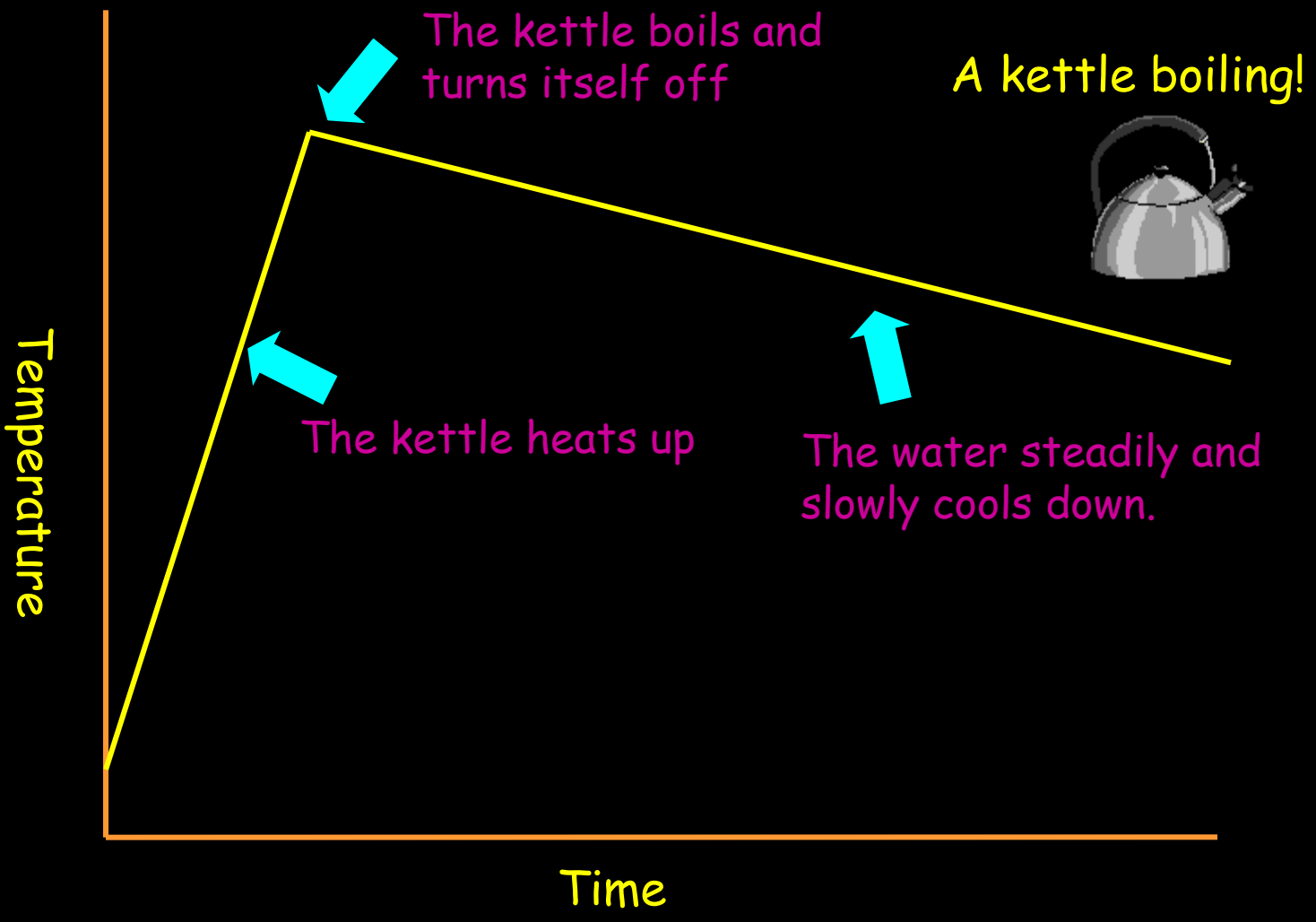
Every Graph tells a Story



What do you think this graph is about?

CLICK!

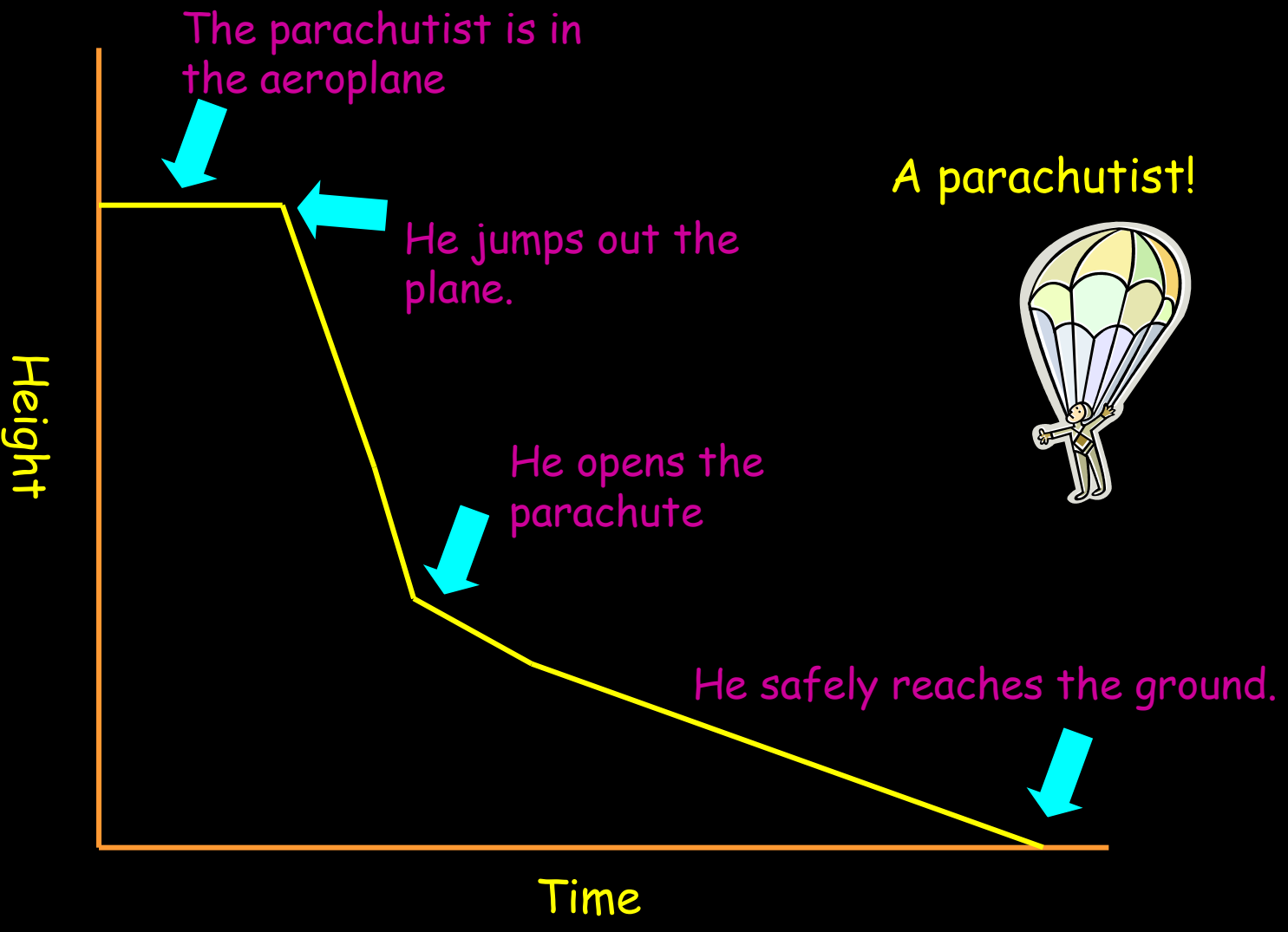
Every Graph tells a Story



What do you think this graph is about?

CLICK!

Every Graph tells a Story

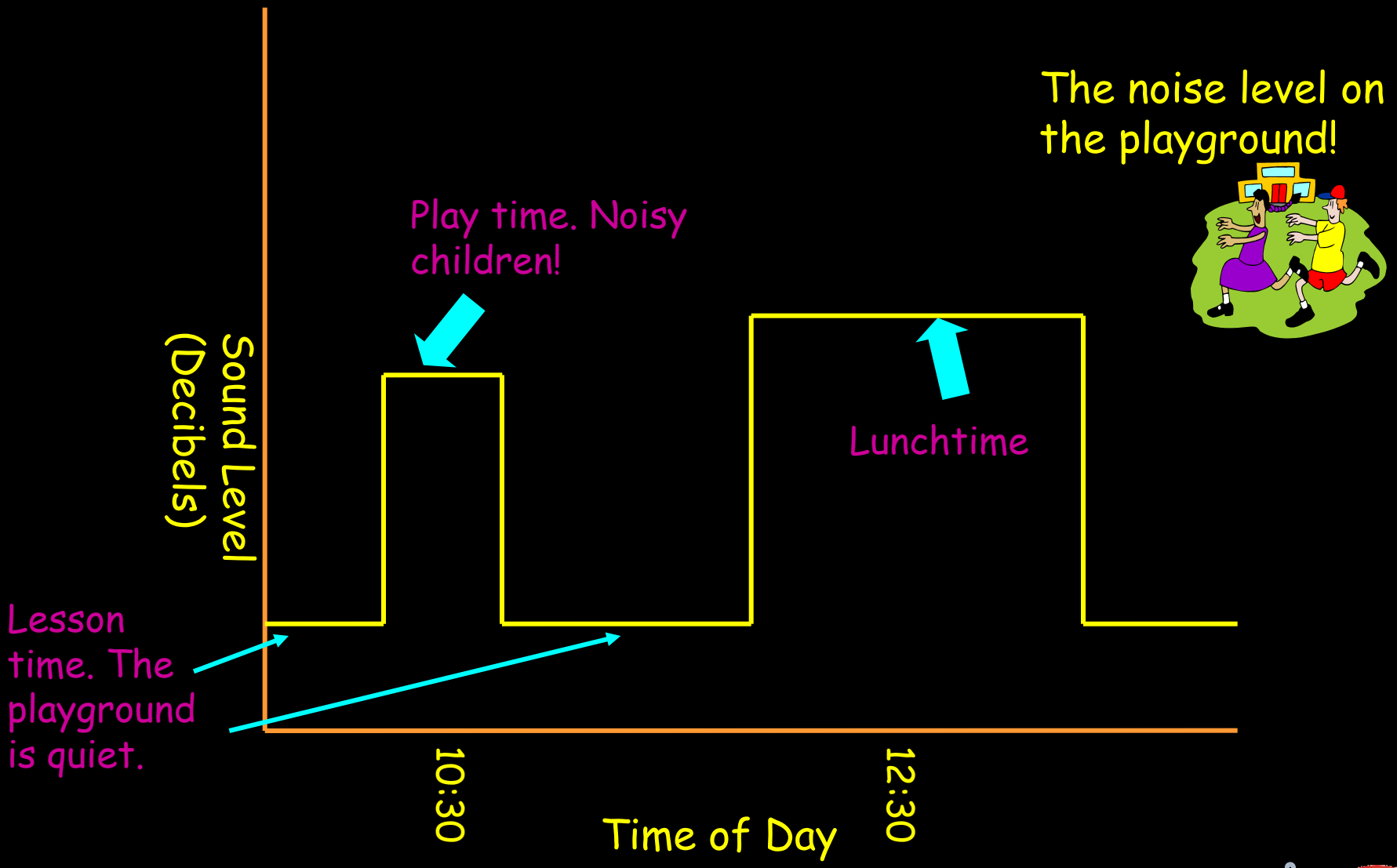


A parachutist!

What do you think this graph is about?

CLICK!

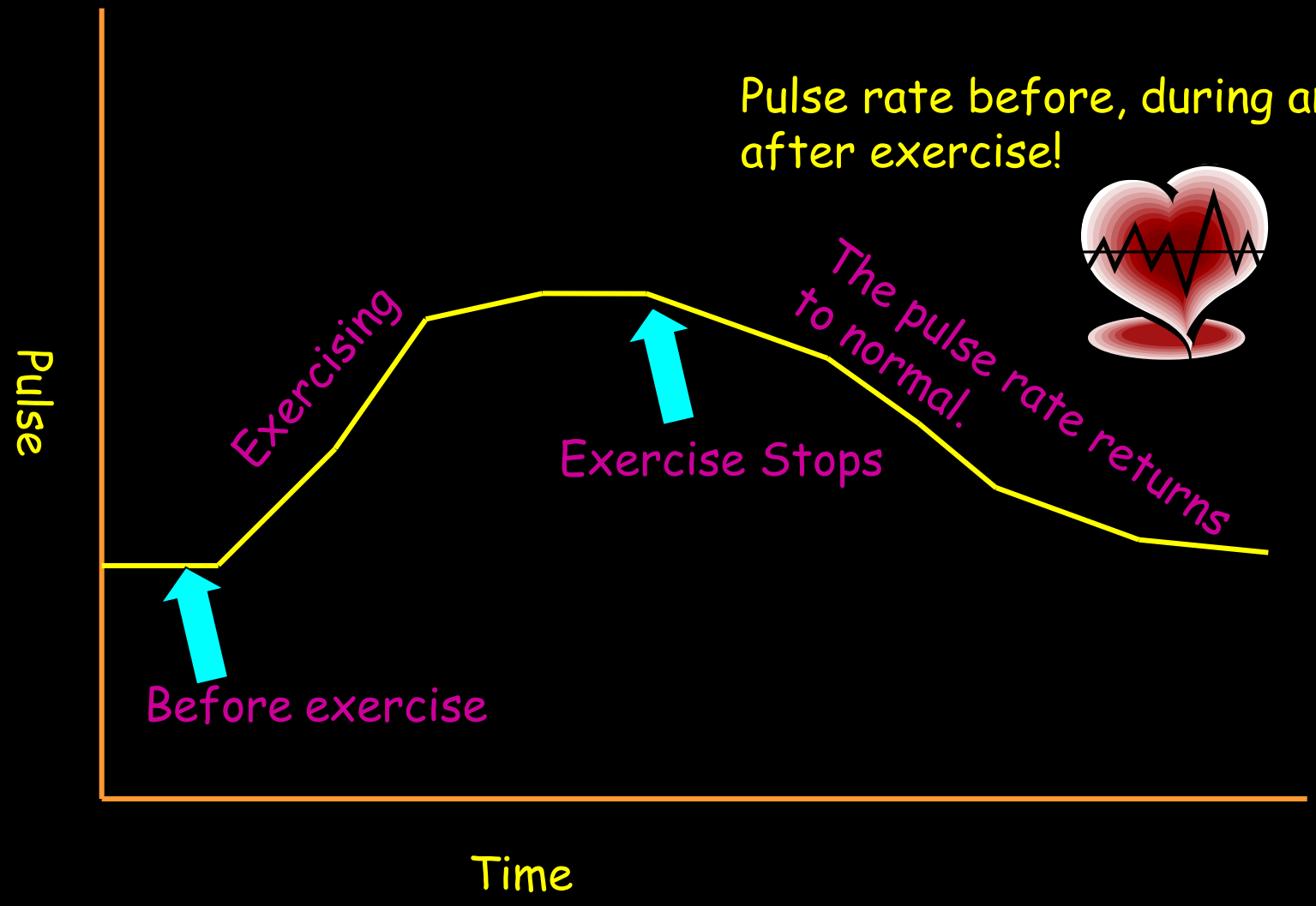
Every Graph tells a Story



What do you think this graph is about?

CLICK!

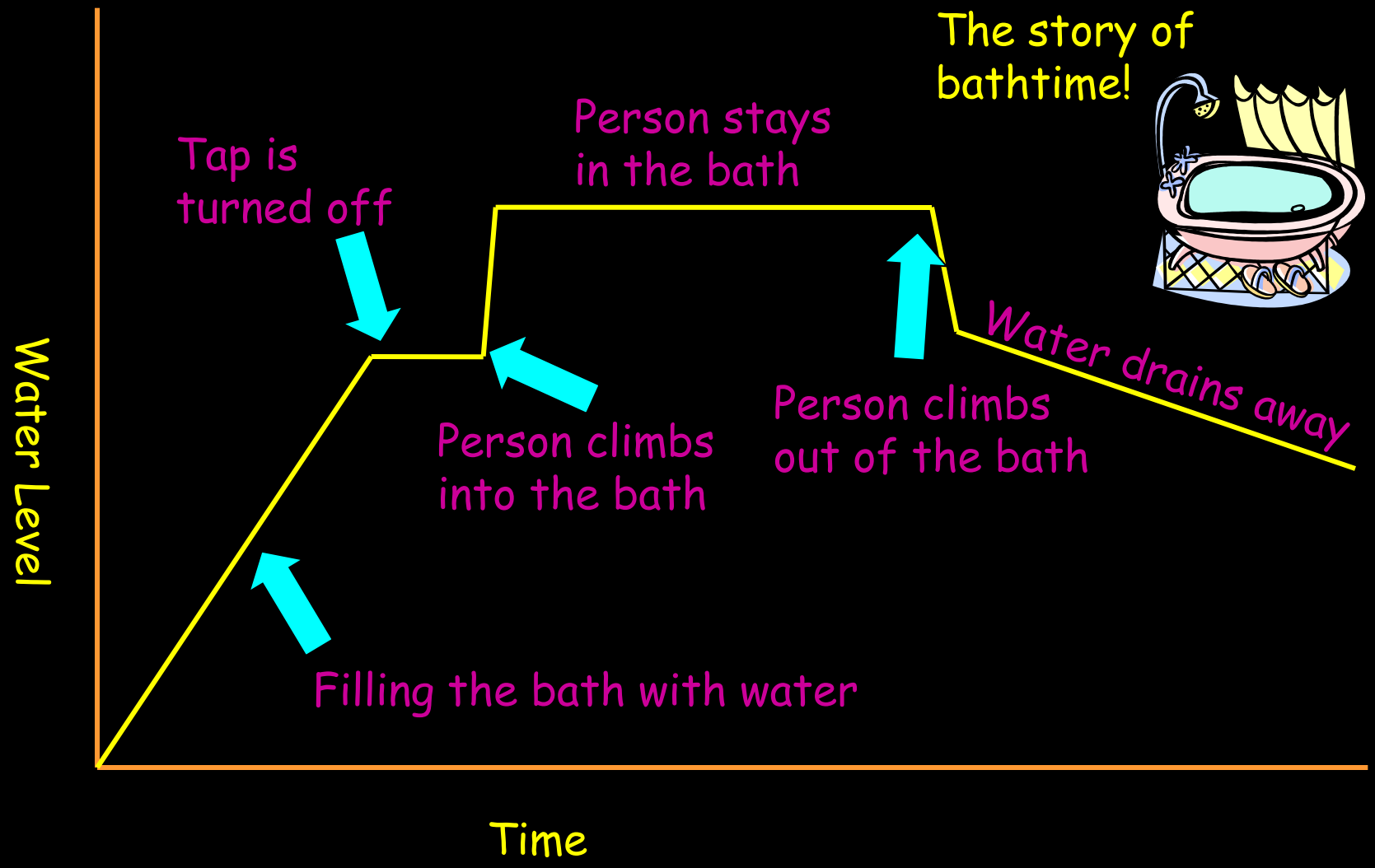
Every Graph tells a Story



What do you think this graph is about?

CLICK!

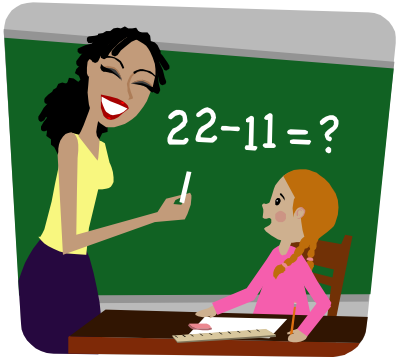
Every Graph tells a Story



What do you think this graph is about?

CLICK!

YOUR TASK!

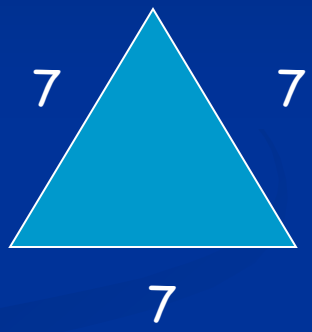


STARTER QUESTIONS

Q1. Which letter has half-turn symmetry

A , C , H , P

Q2. Find all the missing angles



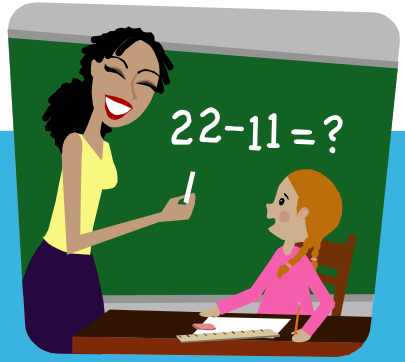
Q1. Name 2 equilaterals that have all angles equal.

Q1. Find

$\frac{3}{5}$ of £200

Learning Objective

Revision:
Find the mean, median and mode from a set of numbers.



Finding the Mean of a Set of Numbers

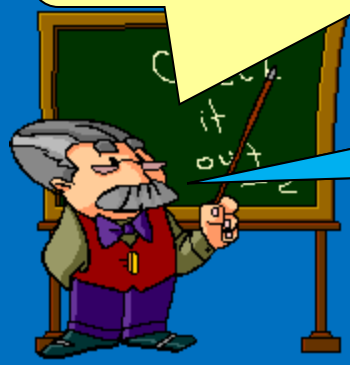
3 + 6 + 4 + 5 + 2 + 4 = 24

$$24 \div 6 = 4$$

24 ↓ total

6 ↘ how many numbers

The mean (average) of all these numbers is 4.



Then we have to divide this total by however many numbers we had...

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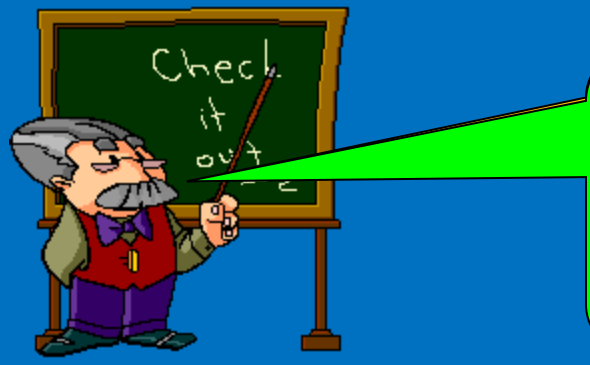
Finding the Mean of a Set of Numbers

Peter	20	3	12	5	10	
Jessica	8	15	17	10		
Lucy	2	8	9	50	3	6

Reveal Answer $50 \div 5 = 10$

Reveal Answer $50 \div 4 = 12.5$

Reveal Answer $78 \div 6 = 12$



As Jessica has the highest mean score, it could be said that she is the best darts player!

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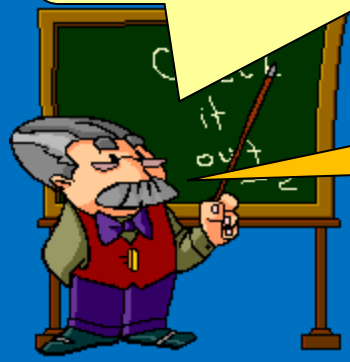
Finding the Median of a Set of Numbers

3 6 4 5 2 4

This is the midway point.

The median of all these numbers is 4.



The 'median' is the number in the middle. To calculate the median, first we have to put the numbers in order.

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Finding the Median

Catherine picks eight number cards.

8	4	5	2	9	7	2	7

Order Cards

2	2	4	5	7	7	8	9

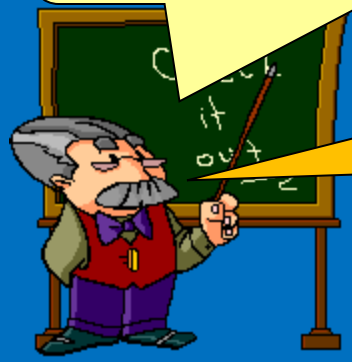
Halfway between 5 and 7 is 6

Show Median

Finding the Mode of a set of numbers

3 6 8 3 5 3 3 2 3 2 5 6 5 3 6 8

The mode is 3. It has come up the most! (6 times)



The 'mode' of a set of numbers means which number has come up the most. Have look at these numbers...

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Median, Mean and Mode

Look at these number cards.
Can you calculate the mean, median and mode?

5	4	7	2	9	7	1

The total is 35.
35 ÷ 7 = 5
The mean is 5.

1	2	3	5	7	7	9

The halfway number is 5.
The median is 5.

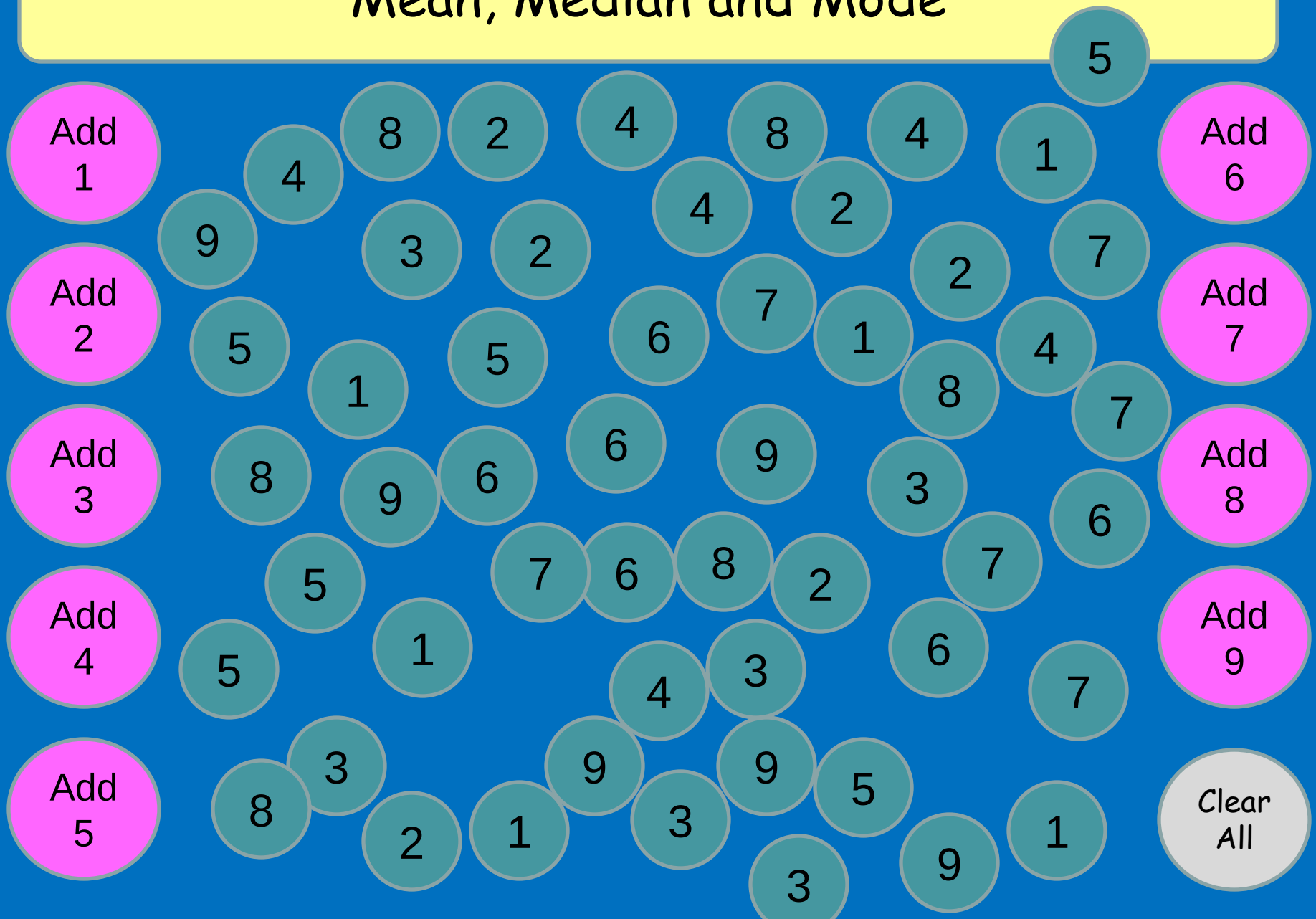
Number 7 comes up the most.
The mode is 7.

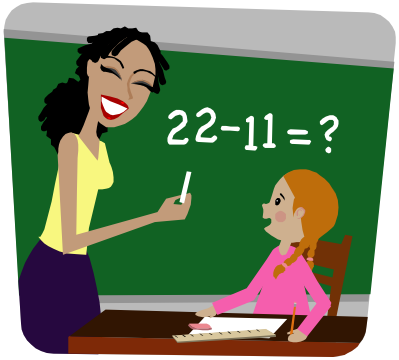
Show Mode

Show Mean

Show Median

Mean, Median and Mode



YOUR TASK!

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