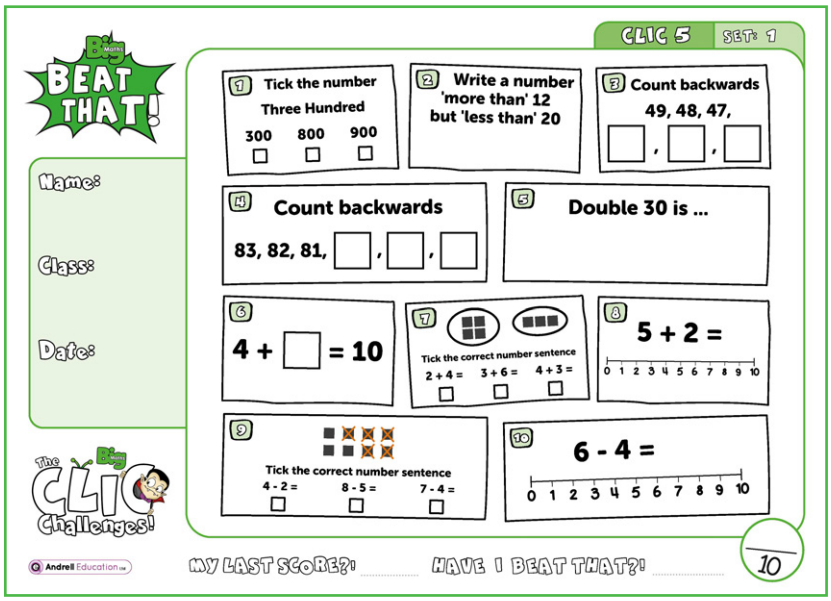
Big Maths

A Guide for Home Learning

CLIC 5

Introduction - CLIC 5

In school, each week, children complete a CLIC challenge. The answers that they provide tell their teacher what skils they understand and allow teachers to focus on teaching the skills that they don't (as well as new skills that will be taught). If your child completes their challenges online at school, you may have been sent a link to log on at home. This pupil log on only allows children to complete one challenge a week. We are currently building a new pupil area, which will help with home learning.



This guide provides you with a copy of a CLIC challenge, a description of the skill each question is challenging and some sample resources for each question to help with home learning. (A description of each of these resources is on the next page.) The key is to keep it fun, no pressure and limit the time to less than 20 minutes a day, unless your child wants to carry on!

Please seek and follow advice from your child's teacher and school!

What skill does each question challenge?

Question 1
I can read 3 digit multiples of 100

Question 2
I can understand numbers to 20

Question 3
I can count backwards from 100 to 0

Question 4
I can count backwards from 100 to 0

Question 5
I can double 2 digit multiples of 10

Question 6
I can find the missing piece to 10

Question 7
I can read a number sentence

Question 8
I can solve addition on a number line

Question 9
I can read a subtraction number sentence

Question 10
I can sol e subtraction on a number line

Remember To's

Every step of learning (skill) in Big Maths has 'Remember to...'s. These are simple reminders for children to 'Remember to' do this, this, etc...

In Big Maths, we have divided complicated skills into small steps, provided 'Remember to...'s and examples to keep it simple for children.

A Progress Drive is a collection of skill steps that progress a child's learning to the point of mastering the larger objective.

Repeat Sheets

Repeat sheets contain a number of questions (usually 10) that you can use for repeat practice of a particular step. Please feel free to create your own repeat questions to avoid children simply memorising the questions and answers.

Revisit Sheets

Revisit sheets contain a number of questions (usually 10) that you can use which include a unit of measure applied to the numbers (It's Nothing New!) of a particular step. Please feel free to create your own revisit questions to avoid children simply memorising the questions and answers.

Real Life Maths Sheets

Real Life Maths sheets contain a number of questions (usually 5) where the questions have been placed into worded scenarios for a particular step, increasing the complexity and challenge further. Please feel free to create your own real life maths questions to avoid children simply memorising the questions and answers.

Select Sheets

Select sheets contain a number of worded questions (usually 5) which no longer automatically relate to the step we are on. These increase the complexity and challenge further still. Please feel free to create your own select questions to avoid children
simply memorising the questions and answers.

CLIC 5

The following CLIC challenge is an example for you to use to practice at home. We have included the answer sheet as well. Please feel free to create your own additional questions by changing the numbers for any that your child gets wrong. In this pack, there is additional advice for each question, with resources that can help with home learning. It is important that you use the correct challenge level as provided by your teacher.

Big Maths BEAT THAT!

Name:

Class:

Date:

1 Tick the number

Three Hundred

300 ☐ 800 ☐ 900 ☐

2 Write a number 'more than' 12 but 'less than' 20

3 Count backwards

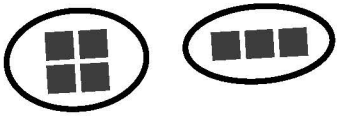
49, 48, 47, ☐ , ☐ , ☐

4 Count backwards

83, 82, 81, ☐ , ☐ , ☐

5 Double 30 is ...

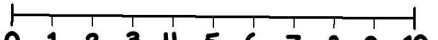
6 $4 + \square = 10$

7 

Tick the correct number sentence

2 + 4 = ☐ 3 + 6 = ☐ 4 + 3 = ☐

8 5 + 2 =



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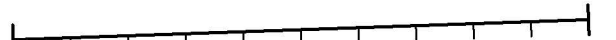
Tick the correct number sentence

4 - 2 = ☐ 8 - 5 = ☐ 7 - 4 = ☐

10 6 - 4 =



The Big Maths CLIC Challenges!

Big Maths BEAT THAT!

Name:

Class:

Date:

1 Tick the number

Three Hundred

300 ☑ 800 ☐ 900 ☐

2 Write a number 'more than' 12 but 'less than' 20

13, 14, 15, 16, 17, 18, 19

3 Count backwards

49, 48, 47, [46] , [45] , [44]

4 Count backwards

83, 82, 81, [80] , [79] , [78]

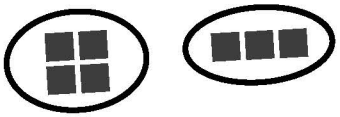
5 Double 30 is ...

60

6

4 + [6] = 10

7

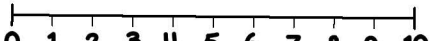


Tick the correct number sentence

2 + 4 = ☐ 3 + 6 = ☐ 4 + 3 = ☑

8

5 + 2 = 7



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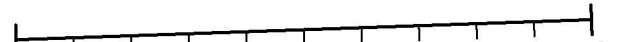
Tick the correct number sentence

4 - 2 = ☐ 8 - 5 = ☑ 7 - 4 = ☐

10

6 - 4 = 2



The Big Maths CLIC Challenges!

Andrell Education Ltd

MY LAST SCORE?! ..... HAVE I BEAT THAT?! .....

10

Question Practice Resources

Question 1 - I can read 3 digit multiples of 100

Remember to:

- say the hundreds digit
- then say "hundred"

Steps 3/4/5 | Reading Numbers: 1 to 10

All Steps

Sticky Play

Teaching Resource

The Learning Leader introduces:

Captain Squiggle

a superhero in training

Captain Squiggle is struggling to read his numbers. This makes life very difficult for him, as all of his instructions contain numbers and he is often late for his superhero training sessions as he never knows where to go.

The Learning Leader adds planets with the numerals 1 , 2 , 3 etc. to the outdoor environment. Captain Squiggle is entrusted to the care of a child in the group and the Learning Leader then holds up a flashcard showing the numeral 1 , 2 , 3 etc.

The children must run to the correct planet to ensure Captain Squiggle is not late for his training session.

Once Captain Squiggle (and the children who are helping him!) have mastered the first set of digits, the Learning Leader introduces the next digits in the progress drive to the game.

Step 5

Reading Numbers: 1 to 10

6, 7, 8, 9, 10, 0

Use Play

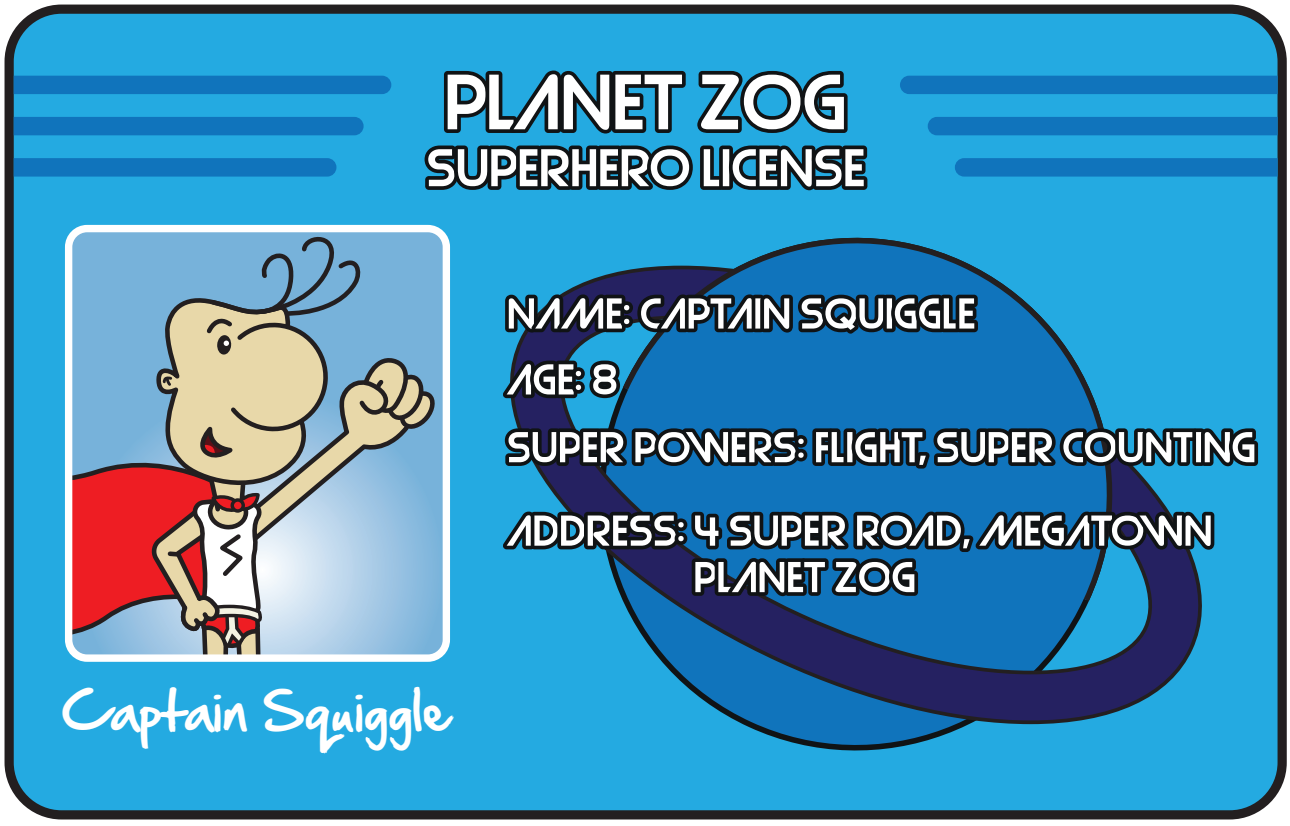
Teaching Resource

Captain Squiggle

a superhero in training

Captain Squiggle has been given a final test.

He must squirt some number aliens with water, shouting out the numbers they are wearing as he does so. The children are invited to show Captain Squiggle what he must do to finally earn his **'Superhero license'.**



Step 5 | Reading Numbers: 2d Numbers

45 (just given)

Use Play

Teaching Resource

Objects to a Hundred

Once children have demonstrated they can read any and every 2 digit number they are offered a play opportunity that allows them to practice reading numbers to 100.

The Learning Leader provides a collection of objects labelled 1 – 100 (for example gold coins, cubes, sweets)

The children must choose one object at a time, read the number and place it in the corresponding pocket on the hundred chart.

Question Practice Resources

Question 2 - I can understand numbers to 20

Remember to:

- use your 'counting to 20' skills to check you are right

Repeat Questions

Step 2

Mastery of Numbers

I can understand numbers to 20

Remember To:

- use your 'counting to 20' to check you are right

1. **11, 12, 14, 13**

2. **19, 18, 15, 16**

3. **13, 11, 15, 12**

4. **16, 15, 14, 19**

5. **15, 17, 13, 19**

6. **12, 16, 18, 14**

7. **13, 14, 17, 12**

8. **11, 19, 12, 18**

9. **17, 15, 16, 14**

10. **16, 15, 14, 13**

Repeat Answers

Step 2

Mastery of Numbers

I can understand numbers to 20

Remember To:

- use your 'counting to 20' to check you are right

1. **11, 12, 13, 14**
2. **15, 16, 18, 19**
3. **11, 12, 13, 15**
4. **14, 15, 16, 19**
5. **13, 15, 17, 19**
6. **12, 14, 16, 18**
7. **12, 13, 14, 17**
8. **11, 12, 18, 19**
9. **14, 15, 16, 17**
10. **13, 14, 15, 16**

Big Maths Revisit Questions

Step 2 Mastery of Numbers

I can understand numbers to 20

Remember To:

- use your 'counting to 20' to check you are right

1. **10m, 12m, 14m, 13m**

2. **19cm, 18cm, 13cm, 16cm**

3. **14km, 11km, 15km, 12km**

4. **16g, 15g, 14g, 19g**

5. **15mg, 17mg, 13mg, 19mg**

6. **12L, 16L, 18L, 14L**

7. **13ml, 14ml, 17ml, 12ml**

8. **11s, 19s, 12s, 18s**

9. **17mm, 15mm, 16mm, 14mm**

10. **16kg, 15kg, 14kg, 13kg**

Big Maths Revisit Answers

Step 2 — Mastery of Numbers

I can understand numbers to 20

Remember To:

- use your 'counting to 20' to check you are right

1. **10m, 12m, 13m, 14m**
2. **13cm, 16cm, 18cm, 19cm**
3. **11km, 12km, 14km, 15km**
4. **14g, 15g, 16g, 19g**
5. **13mg, 15mg, 17mg, 19mg**
6. **12L, 14L, 16L, 18L**
7. **12ml, 13ml, 14ml, 17ml**
8. **11s, 12s, 18s, 19s**
9. **14mm, 15mm, 16mm, 17mm**
10. **13kg, 14kg, 15kg, 16kg**

Question Practice Resources

Question 3 - I can count backwards from 100 to 0

Step 2 | Saying Numbers: Counting Backwards

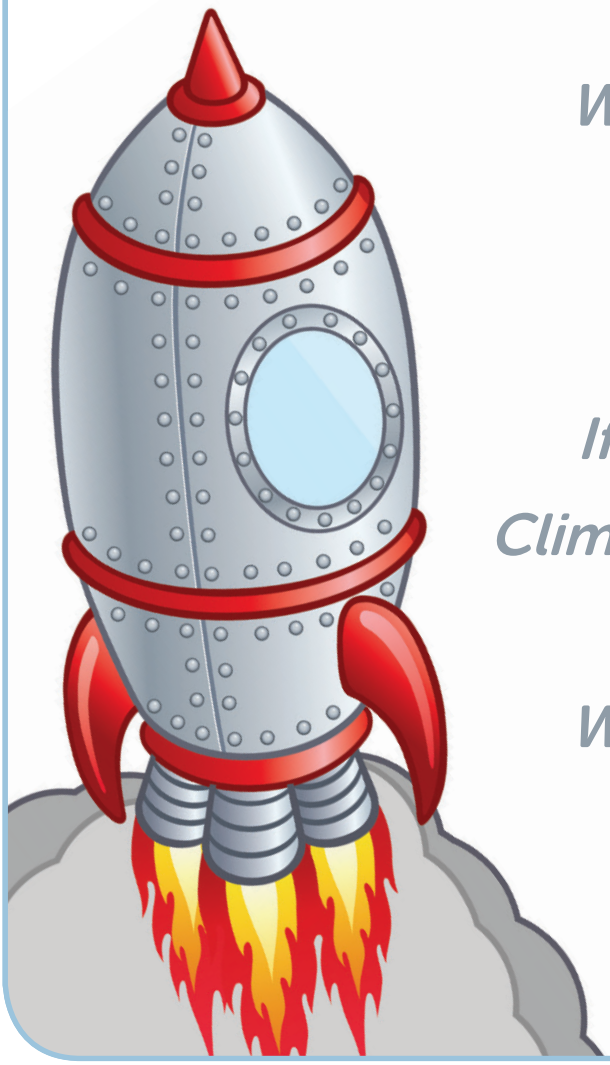
10 ... 0

Sticky Play

Teaching Resource

Zoom Zoom Zoom

At least once a day the Learning Leader leads the children in singing the following song, which provides an opportunity for children to join in counting backwards from 10.



Zoom, zoom, zoom,

We're going to the moon,

Zoom, zoom, zoom,

We're going very soon.

If you want to take a trip,

Climb on board my rocket ship,

Zoom, zoom, zoom,

We're going to the moon.

10, 9, 8, 7, 6,

5, 4, 3, 2, 1

Question Practice Resources

Question 4 - I can count backwards from 100 to 0

Step 3 | Saying Numbers: Counting Backwards

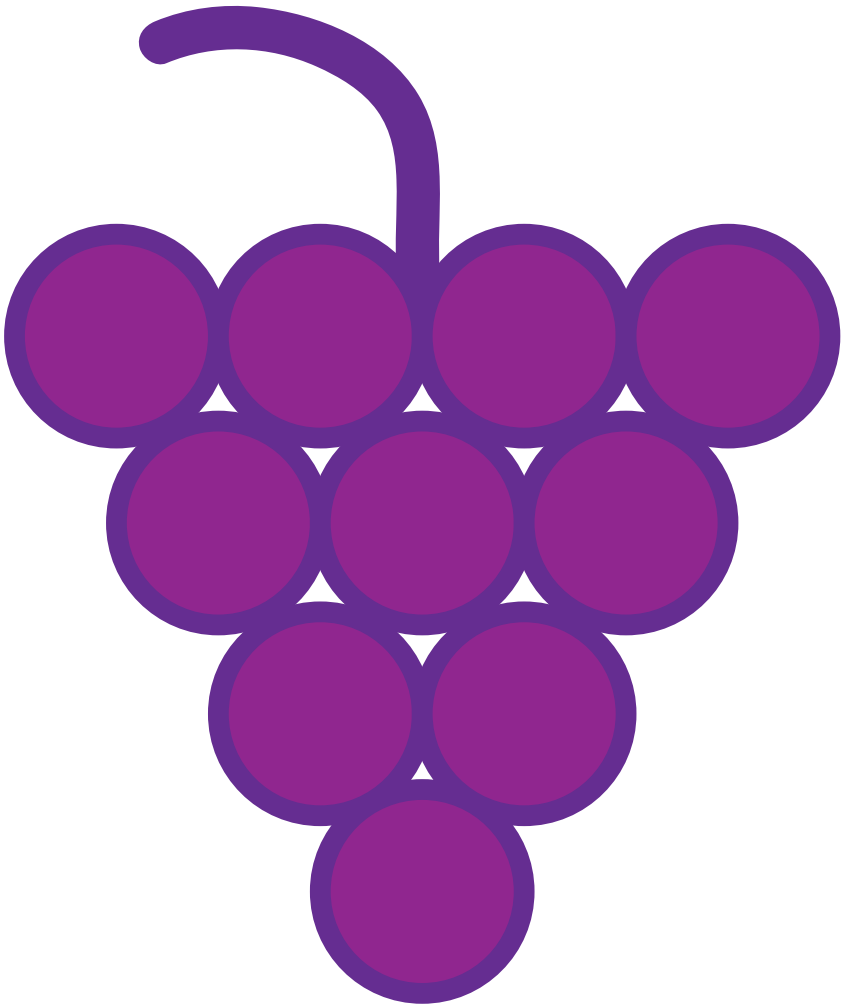
20... 0

Use Play

Teaching Resource

The Backwards Snack

The Learning Leader provides children with a healthy snack, for example 20 grapes. The children eat one grape at a time, counting backwards until all of the snack is gone.



Question Practice Resources

Question 5 - I can double 2 digit multiples of 10

Remember to:

- learn that double 10 is 20, 20 is 40, 30 is 60, 40 is 80

Repeat Questions

Step 2 — **Doubling With Pim (Without Crossing 10)**

I can double 2d multiples of 10

Remember To:

learn that, double...

- 10 is 20
- 20 is 40
- 30 is 60
- 40 is 80

1. **Double 20 is**
2. **Double 10 is**
3. **Double 30 is**
4. **Double 40 is**
5. **Double 10 is**
6. **Double 40 is**
7. **Double 30 is**
8. **Double 20 is**
9. **Double 40 is**
10. **Double 10 is**

Repeat Answers

Step 2 — **Doubling With Pim (Without Crossing 10)**

I can double 2d multiples of 10

Remember To:

learn that, double...

- 10 is 20
- 20 is 40
- 30 is 60
- 40 is 80

1. **Double 20 is 40**
2. **Double 10 is 20**
3. **Double 30 is 60**
4. **Double 40 is 80**
5. **Double 10 is 20**
6. **Double 40 is 80**
7. **Double 30 is 60**
8. **Double 20 is 40**
9. **Double 40 is 80**
10. **Double 10 is 20**

Big Maths Revisit Questions

Step 2 — **Doubling With Pim (Without Crossing 10)**

I can double 2d multiples of 10

Remember To:

learn that, double...

- 10 is 20
- 20 is 40
- 30 is 60
- 40 is 80

1 **Double 20m is**

2 **Double 10cm is**

3 **Double 30km is**

4 **Double 40g is**

5 **Double 10mg is**

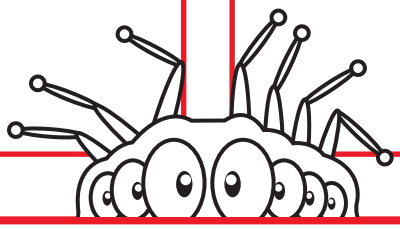
6 **Double 40L is**

7 **Double 30ml is**

8 **Double 20s is**

9 **Double 40mm is**

10 **Double 10kg is**



Revisit Answers

Step 2 — **Doubling With Pim (Without Crossing 10)**

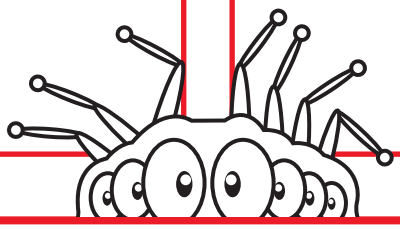
I can double 2d multiples of 10

Remember To:

learn that, double...

- 10 is 20
- 20 is 40
- 30 is 60
- 40 is 80

1. **Double 20m is 40m**
2. **Double 10cm is 20cm**
3. **Double 30km is 60km**
4. **Double 40g is 80g**
5. **Double 10mg is 20mg**
6. **Double 40L is 80L**
7. **Double 30ml is 60ml**
8. **Double 20s is 40s**
9. **Double 40mm is 80mm**
10. **Double 10kg is 20kg**



Real Life Maths Questions

Step 2 — **Doubling With Pim (Without Crossing 10)**

I can double 2d multiples of 10

Remember to:

learn that, double...

- 10 is 20
- 20 is 40
- 30 is 60
- 40 is 80

1 **A box of sweets costs £40. How much do 2 boxes cost?**

2 **There are 30 people at a party. Each person gets 2 drinks. How many drinks are there in total?**

3 **Pom has 2 boxes of chocolates. Each box contains 20 chocolates. How many chocolates are there in total?**

4 **What is double 30?**

5 **Mully wants to buy 2 boxes of apples. Each box costs £10. How much does it cost in total?**

Real Life Maths Answers

Step 2 — **Doubling With Pim (Without Crossing 10)**

I can double 2d multiples of 10

Remember to:

learn that, double...

- 10 is 20
- 20 is 40
- 30 is 60
- 40 is 80

1 **A box of sweets costs £40. How much do 2 boxes cost?**

They cost £80.

2 **There are 30 people at a party. Each person gets 2 drinks. How many drinks are there in total?**

There are 60 drinks.

3 **Pom has 2 boxes of chocolates. Each box contains 20 chocolates. How many chocolates are there in total?**

There are 40 chocolates in total.

4 **What is double 30?**

The answer is 60.

5 **Mully wants to buy 2 boxes of apples. Each box costs £10. How much does it cost in total?**

It costs £20 in total.

Question Practice Resources

Question 6 - I can find the missing piece to 10

Remember to:

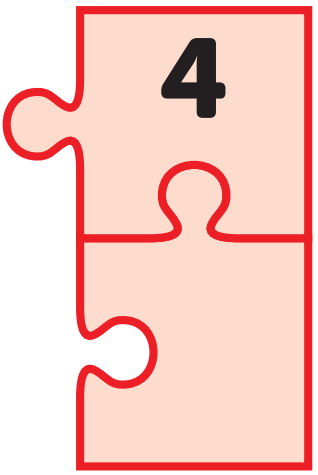
- use your Learn Its:
  1 links with 9,
  2 links with 8,
  3 links with 7,
  4 links with 6,
  5 links with 5

Big Maths **Repeat** Questions

Step 1 **INN: Number Bonds to 10**

I can find the missing piece to 10

Example



= 10

Remember to:

Use your Learn Its...

- 1 links with 9
- 2 links with 8
- 3 links with 7
- 4 links with 6
- 5 links with 5

1. 5 + ☐ = 10
2. ☐ + 3 = 10
3. 8 + ☐ = 10
4. 9 + ☐ = 10
5. 2 + ☐ = 10
6. 6 + ☐ = 10
7. ☐ + 1 = 10
8. ☐ + 5 = 10
9. 4 + ☐ = 10
10. ☐ + 2 = 10

Repeat Answers

Step 1 INN: Number Bonds to 10

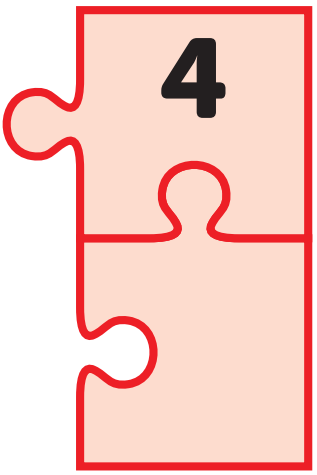
I can find the missing piece to 10

Remember to:

Use your Learn Its...

- 1 links with 9
- 2 links with 8
- 3 links with 7
- 4 links with 6
- 5 links with 5

Example



= 10

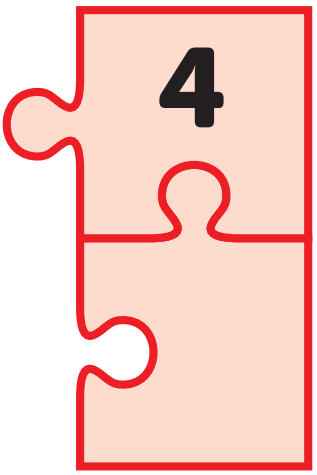
1. 5 + 5 = 10
2. 7 + 3 = 10
3. 8 + 2 = 10
4. 9 + 1 = 10
5. 2 + 8 = 10
6. 6 + 4 = 10
7. 9 + 1 = 10
8. 5 + 5 = 10
9. 4 + 6 = 10
10. 8 + 2 = 10

Big Maths Revisit Questions

Step 1 INN: Number Bonds to 10

I can find the missing piece to 10

Example



= 10

Remember to:

Use your Learn Its...

- 1 links with 9
- 2 links with 8
- 3 links with 7
- 4 links with 6
- 5 links with 5

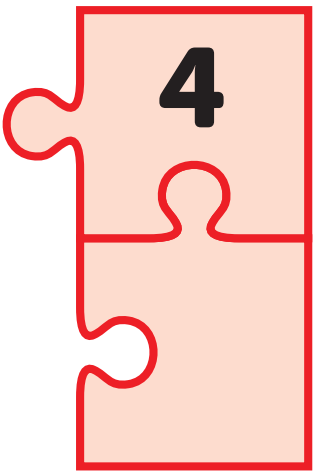
1. 6m + ☐ = 10m
2. ☐ + 3cm = 10cm
3. 8km + ☐ = 10km
4. 9g + ☐ = 10g
5. 2mg + ☐ = 10mg
6. ☐ + 1ml = 10ml
7. 6L + ☐ = 10L
8. ☐ + 5s = 10s
9. 4mm + ☐ = 10mm
10. ☐ + 2kg = 10kg

Big Maths **Revisit** Answers

Step 1 **INN: Number Bonds to 10**

I can find the missing piece to 10

Example



Remember to:

Use your Learn Its...

- 1 links with 9
- 2 links with 8
- 3 links with 7
- 4 links with 6
- 5 links with 5

1. 6m + **4m** = 10m
2. **7cm** + 3 = 10
3. 8 + **2km** = 10
4. 9g + **1g** = 10g
5. 2mg + **8mg** = 10mg
6. **9ml** + 1ml = 10ml
7. 6L + **3L** = 10L
8. **5s** + 5s = 10s
9. 4mm + **6mm** = 10mm
10. **8kg** + 2kg = 10kg

Real Life Maths Questions

Step 1 — **INN: Number Bonds to 10**

I can find the missing piece to 10

Remember to:

- 1 links with 9
- 2 links with 8
- 3 links with 7
- 4 links with 6
- 5 links with 5

1 **Pom has 3 sweets. How many more does he need to have 10 sweets?**

2 **Mully has 5 potatoes. How many more does he need to have 10 potatoes?**

3 **Speedy Col has a jug containing 9L of water. The jug can hold 10L. How much more water can she pour in?**

4 **What is the missing piece: 4 + [ ] = 10?**

5 **Pim has run 2km. His target is 10km. How far does he still have to run?**

Real Life Maths Answers

Step 1 — **INN: Number Bonds to 10**

I can find the missing piece to 10

Remember to:

- 1 links with 9
- 2 links with 8
- 3 links with 7
- 4 links with 6
- 5 links with 5

1 **Pom has 3 sweets. How many more does he need to have 10 sweets?**

He needs 7 sweets.

2 **Mully has 5 potatoes. How many more does he need to have 10 potatoes?**

He needs 5 potatoes.

3 **Speedy Col has a jug containing 9L of water. The jug can hold 10L. How much more water can she pour in?**

She can still pour in 1L of water.

4 **What is the missing piece: 4 + [ ] = 10?**

The missing piece is 6.

5 **Pim has run 2km. His target is 10km. How far does he still have to run?**

He still has to run 8km.

Question Practice Resources

Question 7 - I can read a number sentence

Remember to:

- read your number sentence
- say 'add' for '+'
- say 'equals' for '='

Reading Number Sentences

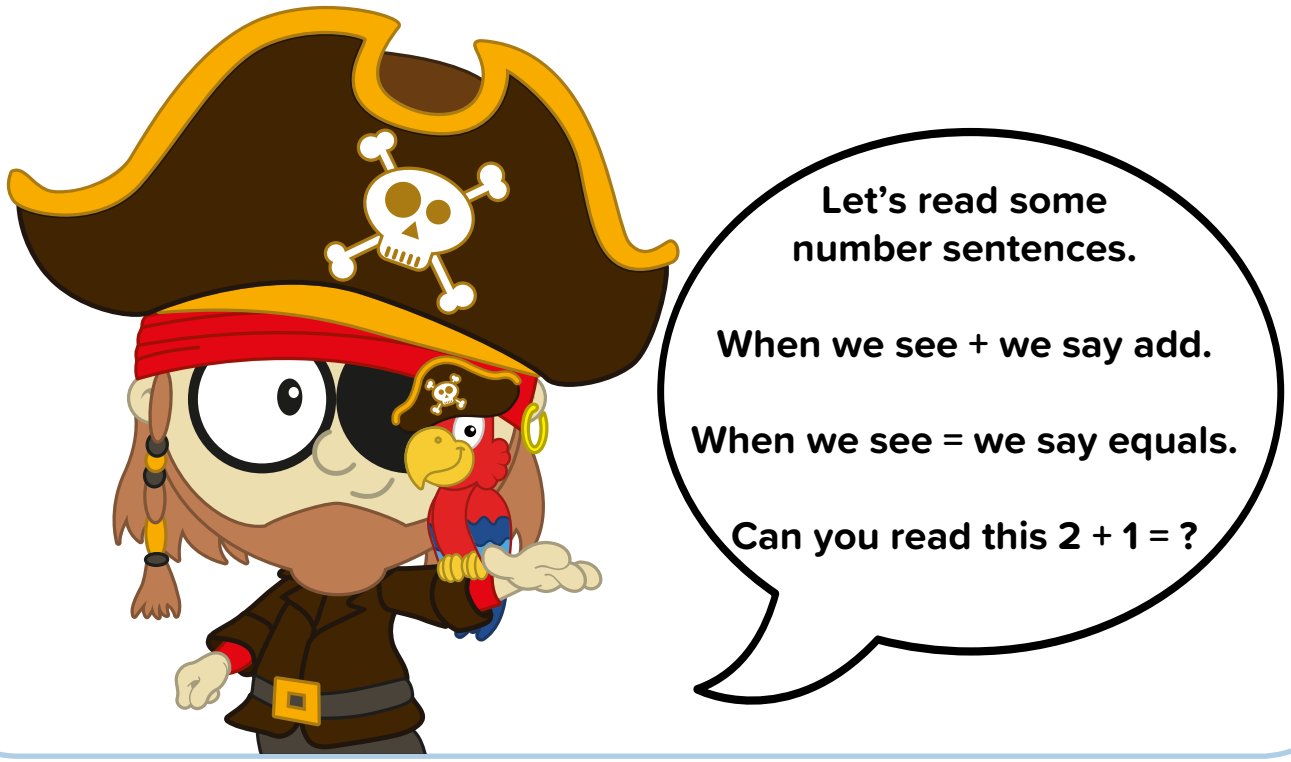
Sticky Play

Teaching Resource

Pirate Pete

Introduce a bossy pirate called **Pete** and a shy parrot called **Polly** to the children.

Pete wants Polly to repeat what he says, like other parrots do. He asks the children if they can help by pretending to be his parrot. Pete points to a symbol, like plus, minus or equals and says the correct words. Pete then points to each number and symbol as he reads a number sentence. After showing Polly what to do, Pete asks the children to help Polly by reading different number sentences. Encourage children to shout the numbers and symbols back to Pete as a parrot would when he points to each one. For example:



Question Practice Resources

Question 8 - I can solve addition on a number line

Remember to:

- find the starting number
- count on the right amount one jump for each number
- see where you have landed

Step 9 — Addition

I can solve addition on a number line

3 + 4 = 7

Remember to:

- find the starting number
- count on the right amount… one jump for each number
- see where you have landed

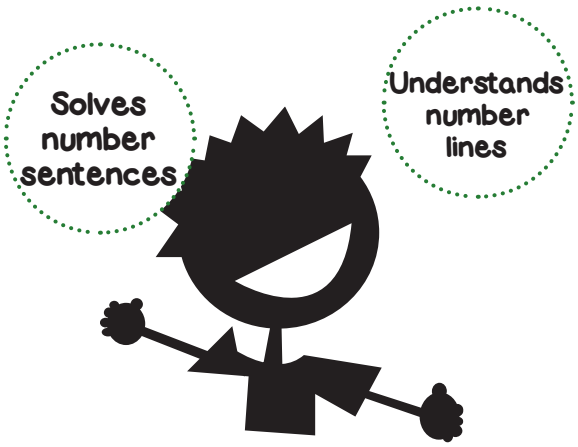
Here we move the maths of the previous step into a different context, that of a number line. It is important to stress to the child that there is no new maths here.

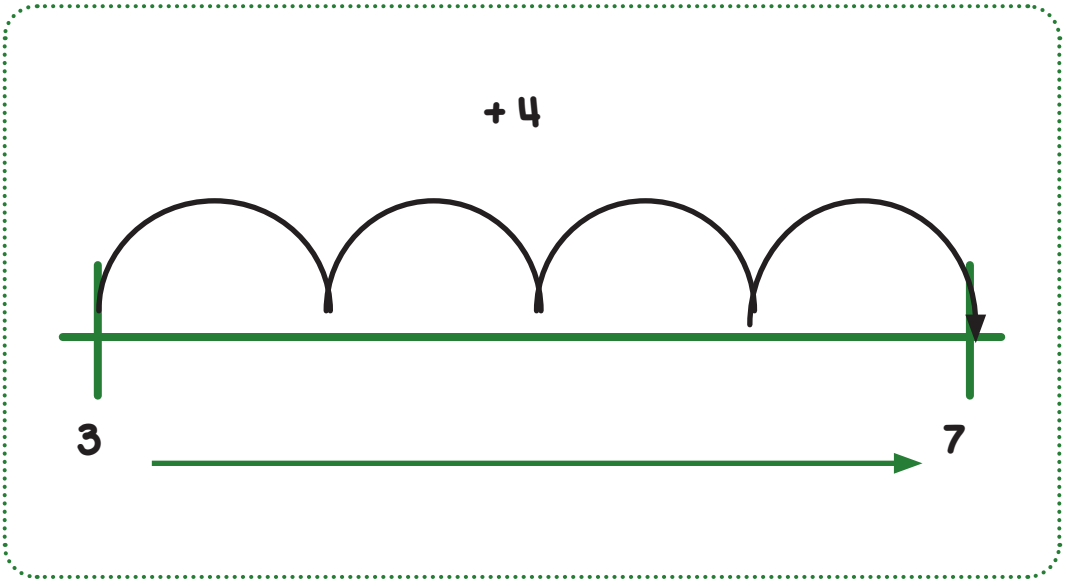
Again the numbers should not be greater then 10 when the children are learning this new skill, because we are concerned with the conceptual shift from physical objects to abstract number lines. However before moving on children would be able to solve any 1digit add 1digit sum on a number line.

To begin with the child should be given a number line to use to show the number sentence. However they could also be given the bottom line of a 100 square.

Before they leave this step they should be challenged to draw out their own number line and use it to solve the addition question. If they can't draw their own number line out please inform their teacher.

The 'remember to…' statements could become crucial here because children may need to apply a clear process before it becomes second nature.





Question Practice Resources

Question 9 - I can read a subtraction number sentence

Remember to:

- read your number sentence

Reading Number Sentences

Sticky Play

Teaching Resource

Pirate Pete

Introduce a bossy pirate called **Pete** and a shy parrot called **Polly** to the children.

Pete wants Polly to repeat what he says, like other parrots do. He asks the children if they can help by pretending to be his parrot. Pete points to a symbol, like plus, minus or equals and says the correct words. Pete then points to each number and symbol as he reads a number sentence. After showing Polly what to do, Pete asks the children to help Polly by reading different number sentences. Encourage children to shout the numbers and symbols back to Pete as a parrot would when he points to each one.

For example: **"Let's read some number sentences.**

When we see - we say take away.

When we see = we say equals.

Can you read this?"

Arranging a subtraction number sentence

6 - 4 =

Question Practice Resources

Question 10 - I can solve subtraction on a number line

Remember to:

- find the starting number
- count back the right amount
- see where you have landed

Step 9

Subtraction

I can solve subtraction on a number line

6 - 4 = 2

Remember to:

- find the starting number
- count back the right amount
- see where you have landed

A critical step! Children move from taking objects away, to counting backwards on a number line. The numbers should not be greater then 10 because we are concerned with the conceptual shift from physical objects to abstract number lines.

To begin with the child should be given a number line to use to 'show' the number sentence. However they could also be given the bottom line of a 100 square.

Before they leave this step they should be challenged to draw out their own number line and use it to solve the subtraction question. If they can't draw their own number line out please inform their teacher.

The 'remember to…' statements could become crucial here because children may need to apply a clear process before it becomes second nature.

You can introduce the phrase 'jumping back' here. The connection between 'taking away' and 'jumping back' should be strongly made. Children can literally 'jump back' on a giant number line.