THIRD SPACE LEARNING

Summer Math Activities

20 Fun math activities for the summer break

Grade 3 to 4

Note to children

Hooray! It's the summer break!
You've worked so hard this year, and learned so many new things in Grade 3 you deserve a big pat on the back. You also deserve to be able to start Grade 4 knowing what you know now – and not forgetting everything over the summer!
So in between your summer adventures and relaxing, are you up for an extra challenge?

Your task is to complete 10 of the activities in this special Summer Math Activities. As well as being lots of fun, the activities will help make sure all of the amazing math that you have learned in Grade 3 sticks in your brain, ready for your new learning adventures in Grade 4.
Simply check off the activities you have attempted and bring this pack back with you when school starts again!
Have fun!

Note to parents and carers

The summer break are finally here! Your child has worked hard all year learning all the math we expect Grade 3 students to know, and now they deserve some rest and relaxation. BUT... this pack is here to make sure they also don't forget all that they've learned and have some fun math activities to keep them going over the summer!
There is lots of evidence that doing just a little bit of math practice over the summer break will make it much, much easier for them to start the next year.

The activities are not intended to be too much like 'work'. They should provide just a bit of a mathematical focus every now and then, and most will fit into your day-to-day plans and life during the summer break. We're setting a target for your child to complete 10 activities over the break, which is only a couple of activities a week. If children are struggling with math, just knowing that they can tick off a handful of activities over the break will really boost their confidence and success when they move into Grade 4.

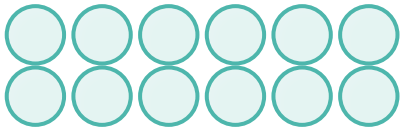
Other children may want to do more and really push themselves. Do what's right for your child. When they've done each activity, please date and sign it so the child knows it's important. Thank you for your support, and we hope you and your child have fun with the activities!

1 Hunting for Arrays

You will need

- Resource Sheet 1

Arrays are all around you! An array shows objects arranged into rows and columns. Remember, an array is a really useful way to show multiplication facts.



For example, this array shows that 2 x 7 = 14. However, arrays are amazing – because of the commutative property, this array shows 7 x 2 = 14 too. Finally, we can also see 14 ÷ 2 = 7 and 14 ÷ 7 = 2!

Your challenge:

- Can you spot at least eight arrays 'out and about' over the break?

How to play:

1. Record the arrays you have spotted on your Resource Sheet 1.

2. Write down 4 math facts that each one shows on your Resource Sheet 1.

3. You may even want to draw each array that you find!

Completion date: .....

Adult initials: .....

2 Who Creates the Most Laundry?

Your challenge:
Can you find out who creates the most laundry in your house?

You will need

- Resource Sheet 2

Things to remember:

1. This one involves helping out with the laundry for a week. (Sorry!) Families generate a LOT of laundry, right? But who in your house generates the most laundry?

2. Before you begin, predict who you think will create the most laundry over the next week.

3. I think that the following person will make the most laundry:

   .....

4. Over the next week, use Resource Sheet 2 to record your results. In the table, record how many items of laundry each person in your house makes in the table.

5. Next create a pictogram of your results.

6. The person who created the most laundry was .....

Completion date: .....

Adult initials: .....

3 The Great Math Bake Off

Your challenge:

- Can you bake something tasty and find the hidden math?

You will need

- A recipe for something yummy
- Ingredients
- An adult to help you

What to do:

1. Cooking is so much fun! But did you know it involves a lot of amazing math too?
2. Work with an adult to bake something yummy. Need an idea of some recipes? Head to bit.ly/TSLrecipes to get some ideas. Have fun in the kitchen, and then fill in the details below. What did you make, and what math skills did you think you used!?
3. Don't forget to taste what you have made!

I made: .....

The math I used was .....

Completion date: .....

Adult initials: .....

4 How Much Screen Time?

You will need

- Resource Sheet 3
- A pencil or pen
- A clock or watch

Your challenge:

- Ever wondered how much time you spend on a 'screen' (such as watching TV or using a tablet or computer) over two days? Well, let's find out!

What to do:

1. Use Resource Sheet 3 to record the start and end time whenever you have 'screen time'.
2. Work out the length of time you spent on the screen.
3. At the end of two days, add up the total amount of time. How many hours and minutes have you spent on a screen? Remember – there are 60 minutes in an hour.

I spent ..... minutes on a screen over 2 days.

This is the same as ..... hours and ..... minutes.

Completion date: .....

Adult initials: .....

5 Card Game Multiplication

Your challenge:

- How well do you know your multiplication facts? You will be multiplying the numbers represented by the playing cards.

You will need

- Deck of cards (Ace = 1, Jack = 11, Queen - 12, King = 13)
- A friend or family member to play against
- A piece of paper to keep score
- 2 or more players

How to play:

1. Deal the entire deck between you and your partner.
2. On the count of three, both players throw down a card and quickly multiply the number on their card by the number on their partner's card.
3. Whoever gets the answer first wins the round.
4. 1 point goes to the winner of each round.
5. The first player that gets 10 points first wins.

I played against .....

Who got 10 points first? .....

Completion date: .....

Adult initials: .....

6 Math, Paper, Scissors

Your challenge:

- Can you win the math version of 'Rock, Paper, Scissors?'

You will need

- Nothing
- 2 or more players

How to play:

1. Explain that this is a math version of 'Rock, Paper, Scissors'. (It may be useful to demonstrate the game initially.) You can play this game at home with your child.
2. Players stand facing each other. Players make two fists, and simultaneously say 'math, paper, scissors' while moving their fists up and down (like when you actually play "Rock, Paper, Scissors'). On scissors, each player puts out between 1 and 10 fingers.
3. Players race to multiply the number of fingers they put out by the number of fingers their partner put out and call out the answer. The player to call the correct answer first wins a point.
4. Play for the allotted time period (for example 2 minutes).
5. Once the game is played a couple of times, begin to think about the possible answers based on the number of fingers.

I played with: .....

How many rounds did you play? .....

Completion date: .....

Adult initials: .....

7 Roll the Place Value

You will need

- 1 dice
- Paper and pencil
- 1 or more players

Your challenge:

- Can you write 3 digit numbers in expanded form?

How to play:

1. Player rolls the dice 3 times. The first roll represents the hundreds place, the second roll represents the tens place, and the third roll represents the ones place.
2. Write down the number in standard form.
3. Take the number and then write it in expanded form.

I played with: .....

How many rounds did you play? .....

Completion date: .....

Adult initials: .....

8 Math Snap

Your challenge:

- Can you find equal cards?

You will need

- Resource Sheet 4 cut up (or you can create your own cards)
- At least one other person

How to play:

1. Shuffle the cards from the Resource Sheet 4 and deal them between the players.
2. Play just like you would do in 'normal' snap – take turns to turn over one of your cards and place it in the middle.
3. If the two cards are equivalent, the first person to call 'snap' and place their hands on the pile of cards wins the cards. Remember, equivalent means they are worth the same, for example:
   $\frac{1}{4}$ and $\frac{2}{8}$ or $\frac{1}{8}$ and $\frac{3}{24}$
4. The first player to get all of the cards wins! Try to play the game at least twice.

The first time I played, I played against .....

and the person who won was .....

The second time I played, I played against .....

and the person who won was .....

Completion date: .....

Adult initials: .....

9 Water Balloon Math

Your challenge:

- How many equations can you solve before the water balloon breaks?

You will need

- Balloons
- Water
- 2 or more players
- Marker

How to play:

1. Fill 10 balloons with water and with a marker write math equations on the balloons (see the list below).
2. Arrange players in groups of 2 or 3 about 2 feet away from each other.
3. Take turns throwing the balloon to the other player with a math fact.
4. When the other player catches the balloon, they must say the answer.
5. Each time a player answers correctly, the player must take a step backward.
6. The goal is to answer as many math equations correctly as possible before the water balloon breaks.
7. If it's warm, do 5 rounds!

6 x 6	12 ÷ 3
10 x 3	42 ÷ 7
9 x 7	80 ÷ 10
11 x 4	48 ÷ 6
8 x 6	60 ÷ 5

Completion date: .....

Adult initials: .....

10 Let's Go Geometry Exploring

Your challenge:

- Shapes are everywhere! Can you find 15 shapes in your town, yard, home, friend's home?

You will need

- A partner
- A piece of paper
- Pen or pencil

How to play:

1. You and your partner go exploring for shapes (circles, triangles, quadrilaterals, pentagons, or hexagons).
2. You can look in your house, yard, friend's house, town, pool club, beach, etc..
3. Find 15 shapes in the world around you.
4. When you find a shape, write it down.
5. Once you have found 15 shapes and they are written down – identify the shape.
6. Bring your list to school at the beginning of the year.

I went exploring with: .....

Completion date: .....

Adult initials: .....

11 Frisbee Math

Your challenge:

- How confident are you adding 2 digit numbers? Can you find the sum of two numbers using mental math?

You will need

- A frisbee
- A marker
- 2 or more players

How to play:

1. Take the frisbee and write 2 digit numbers around the edge of the frisbee with the marker.
2. Go outside, one player throws the frisbee to the other player. The player catching the frisbee has to catch it with two hands.
3. The two numbers that the player's hands are touching are the two numbers that the player has to sum.
4. That player then has to throw the frisbee back to the other player where the second player now has to add the two numbers together.
5. You can do this with addition, subtraction, multiplication or division.

I played with: .....

Who got the most sums correct? .....

Completion date: .....

Adult initials: .....

12 Hopscotch Math

Your challenge:

- Can you hop number patterns?

You will need

- 2 or more players
- Sidewalk chalk
- Sample 5 x 5 grid

How to play:

1. Find a place outside to play.
2. Draw a large 5 by 5 grid with the sidewalk chalk.
3. Number each square on the grid starting with 1.
4. Decide what pattern you want to hop (for example, hop on all the even numbers, hop on all the numbers that are a multiple of 2)
5. Once you decide on the pattern, player one goes first by hopping with one foot on all the numbers in the pattern.
6. The next player then goes, hopping on the same pattern.
7. Whoever hops on the correct numbers without putting their other foot down wins the round.

I played with: .....

Who won the first round? .....

Completion date: .....

Adult initials: .....

13 Count the Change

Your challenge:

- Can you count the change?

How to play:

You will need

- Paper
- Pencil
- A friend or family member

1. Find a friend or family member to do this challenge with.
2. Over the course of a week, look for spare change in jars around the house, change purses, on the floor, in between the couch pillows, on the ground outside.
3. Keep a log of all the change you find in a week.
4. At the end of the week, add up the total amount of money you found.
5. Did you get to keep it?

I did this challenge with: .....

Completion date: .....

Adult initials: .....

14 Number Line Fun

Your challenge:

- Can you jump to the correct multiples?

You will need

- 2 or more players
- Sidewalk chalk

How to play:

1. Find a place outside to draw a number line up to the number 50.
2. Decide which player will be the caller and which player will be “jumper”.
3. The caller calls out, “Multiples of 2”.
4. Starting at 0, the jumper has to jump to all the numbers that are a multiple of 2.
5. In the next round, switch positions.

I played with: .....

We played ..... rounds.

Completion date: .....

Adult initials: .....

15 Measuring Sticks

Your challenge:

- How big are the sticks in your neighborhood?

You will need

- Yard stick
- Paper
- Pencil
- Resource Sheet 5

How to play:

1. Search for sticks at the park, in your yard or in a friend's yard.
2. Collect 20 sticks.
3. Measure each of the sticks to the nearest whole inch.
4. Keep a tally of how long each stick is.
5. Graph the tallies on a line plot and answer the questions on Resource Sheet 5.

When school starts, bring your graph to show your class.

Completion date: .....

Adult initials: .....

16 How many ways?

Your challenge:

- How many calculations can you do?

How to play:

You will need

- 2 or more players
- A dice
- Paper and pencil

1. Throw the dice 3 times to generate a 3 digit number - write down that number.
2. Players then have 3 minutes to make as many different calculations where the target number is the answer.
3. 1 point is given for each correct calculation, using an operation which hasn't been used before. For example, a point is given for an addition calculation but if a second addition calculation is recorded, a second point won't be given.
4. If a 3, 2, and 1 were thrown, this would give a target number of 321.
5. The players could create an addition example such as 169 + 152 = 321, or a subtraction calculation such as 825 - 504 = 321. Another example could be 642 ÷ 2 = 321.

I played with: .....

Who won? .....

Completion date: .....

Adult initials: .....

17 Flip For Dominoes

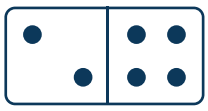
You will need

- Dominoes
- Paper/Pencil
- 2 players or more

Your challenge:

- How well do you know your multiplication facts?

How to play:

1. Take all the dominoes and sort them evenly among all the players with the "dot" side down.
2. On the count of 3, all players flip one of their dominoes.
3. Players have to multiply the dots together. For example, if you have this domino  you would multiply 2 x 4.
4. The player with the highest product keeps the dominoes in that round.
5. The player with the most dominoes at the end, wins the game.

I played with: .....

Who won? .....

Completion date: .....

Adult initials: .....

18 Roll to Win

Your challenge:

- How high can you roll?

How to play:

You will need

- Dice
- Paper/Pencil
- 2 or more players

1. Player 1 rolls the dice two times. The first roll represents the tens place and the second roll represents the ones place. Write the number down on the paper.
2. Player 2 does the same.
3. When it is player 1's turn again, roll the dice and write down the number, but also add this number to the first number you rolled.
4. Do this 8 times.
5. After the 8th time, the player with the highest sum wins the round.

I played with: .....

Who won the first round? .....

Completion date: .....

Adult initials: .....

19 Multiplication Bingo

Your challenge:

- Can you use your multiplication facts to win at Bingo?

You will need

- 3 or more players
- A piece of paper and a pen or pencil for each player

How to play:

1. Decide which person is going to be the leader.
2. Select a times table to focus on and each player writes five numbers from that times table (for example, the 4 times tables, you might write down 8, 20, 28, 36, and 44).
3. The leader of the game then calls out various expressions from the selected times table (for example, 6 x 4, 2 x 4, 11 x 4, etc...)
4. If an expression is called and a player has the answer to it on their paper, they cross out the number.
5. The winner is the person to cross out all their numbers and shout 'bingo'.

I played with: .....

How many times did you get bingo? .....

Completion date: .....

Adult initials: .....

20 Jumping Jack Fun

Your challenge:

- How many jumping jacks can you do in a minute?

You will need

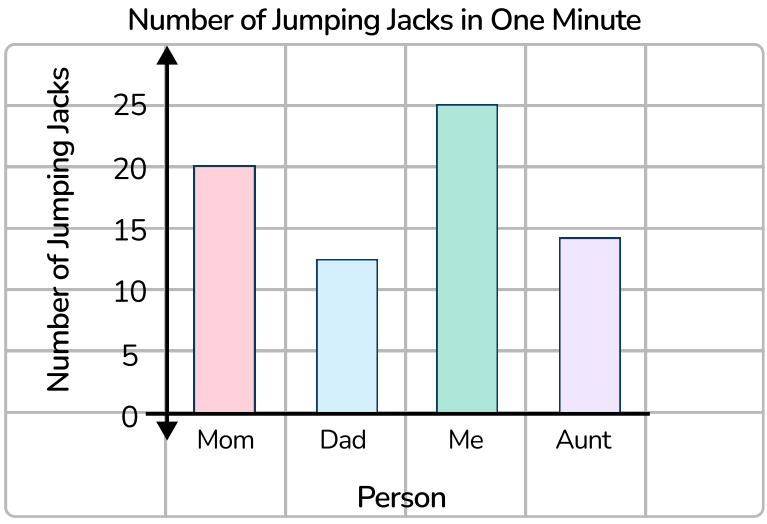
- At least 5 people
- A timer
- Paper
- Pencil

How to play:

1. Set the timer for 1 minute.
2. Have person 1 do as many jumping jacks as possible in the one minute. Record the amount of jumping jacks on the paper.
3. Have the other participants do the same, recording each of the results.
4. Create a scaled bar graph of the results.

When school begins, bring your scaled bar graph to show your class.

Here is an example graph of the results.



Completion date: .....

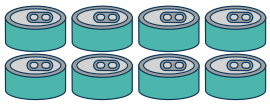
Adult initials: .....

Resource Sheet 1: Hunting for Arrays

Use this sheet to record 8 different arrays that you have spotted during the break .
Write down 4 calculations that each array shows. One has been done for you.

1) The array I spotted was:

cans at the supermarket



4 x 2 = 8

2 x 4 = 8

8 ÷ 2 = 4

8 ÷ 4 = 2

2) The array I spotted was:

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

3) The array I spotted was:

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

4) The array I spotted was:

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

5) The array I spotted was:

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

6) The array I spotted was:

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

7) The array I spotted was:

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

8) The array I spotted was:

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

..... ☐ ..... = ...

Resource Sheet 2: Who Creates the Most Laundry?

A Use the table below to help you record your data.

Family member's name	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Total

B Use the pictogram below to record the totals for each family member. Use the following key or create your own (cross out the given key and show the key you created):

Key:  = 2 clothing items

Pictogram Chart Title: .....

Resource Sheet 2: Who Creates the Most Laundry?

C Write down four things you can tell from the data.

.....

.....

.....

.....

.....

.....

.....

.....

Resource Sheet 3: Screen Time

Use this table to keep track of your screen time over the 2 days.

Day	Time started	Time ended	Duration

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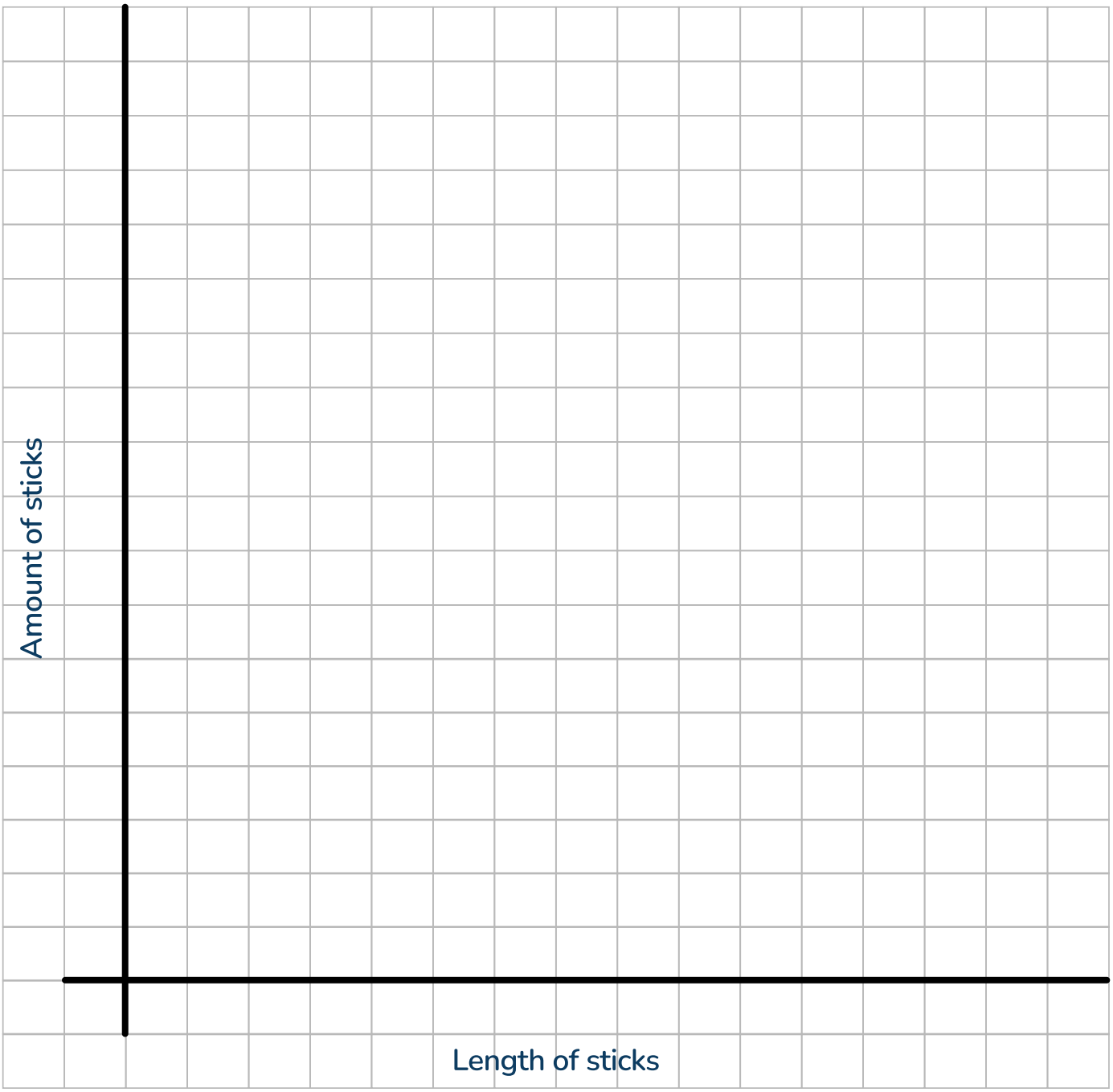
Resource Sheet 4: Math Snap

$\frac{1}{2}$	$\frac{2}{4}$	$\frac{1}{3}$	$\frac{3}{9}$	$\frac{1}{5}$
$\frac{2}{10}$	$\frac{1}{8}$	$\frac{2}{16}$	$\frac{3}{3}$	1
$\frac{2}{3}$	$\frac{4}{6}$	$\frac{1}{4}$	$\frac{3}{12}$	$\frac{5}{5}$
1	$\frac{1}{6}$	$\frac{3}{23}$	$\frac{3}{5}$	$\frac{6}{10}$

Resource Sheet 4: Math Snap

$\frac{1}{7}$	$\frac{2}{14}$	$\frac{3}{4}$	$\frac{6}{8}$	$\frac{5}{10}$
$\frac{3}{6}$	$\frac{4}{5}$	$\frac{8}{10}$	$\frac{6}{6}$	1

Resource Sheet 5: Measuring Sticks



A What was the measurement of the longest stick? .....

B What was the measurement of the shortest stick? .....

C What length measurement did you have the most of? .....

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0-9 Digit Cards

0	1	2	3
4	5	6	7
8	9	0	1
2	3	4	5

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0-9 Digit Cards

6	7	8	9
0	1	2	3
4	5	6	7
8	9		

Do you have a group of pupils who need a boost in maths this term?

Each pupil could receive a personalised lesson every week from our specialist 1-to-1 maths tutors.

- Raise attainment
- Plug any gaps or misconceptions
- Boost confidence

Speak to us

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