Contents Year 3

Introduction

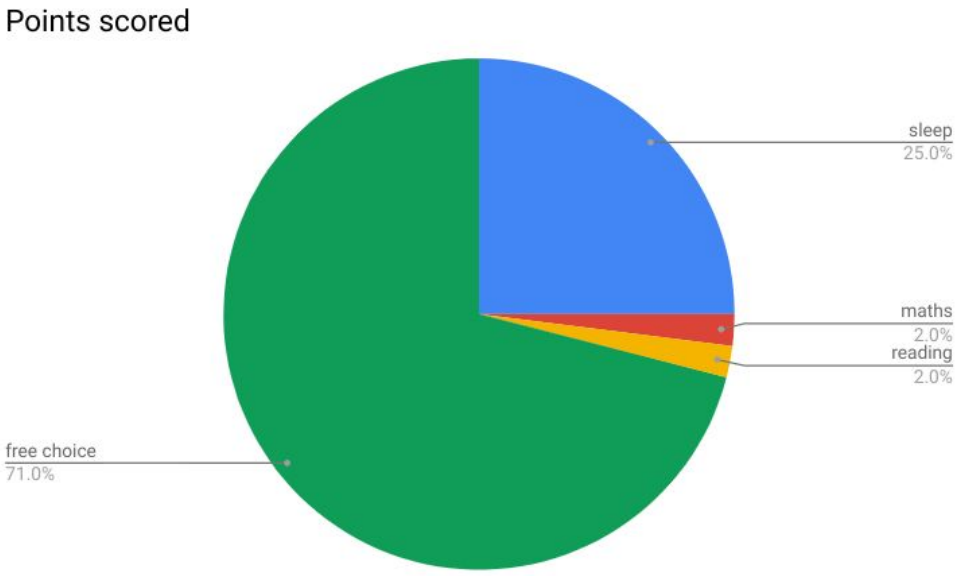
Much positive work has been achieved over the last twenty years by 'The Summer Reading Challenge', whereby children with the help of their parents, are encouraged to read 6 books over the school summer holidays. The Summer Maths Activities Challenge is the Maths equivalent and engages learners and their families in games, puzzles and open-ended problems. It encourages the whole family to take up new fun activities that will promote learning. The Summer Maths Activities Challenge is cross-curricular and your child will be immersed in Art, DT, Science, History and Geography activities, as well as, Maths. Research on the internet is also encouraged.

The Summer Maths Activities Challenge invites and supports the parent to fill the role of teacher during the summer holidays. Indeed ongoing parental input is vital to ensure that the process of learning is an enjoyable experience for the learner. This may seem like a scary prospect for some, however, all that is needed is a positive, helpful and caring environment. These books provide parents with pointers to enable them to easily facilitate their child's learning.

I have recently read, 'Good Ideas: How to be your child's (and your own) Best Teacher', by Michael Rosen, who advocates the power of 'I don't know'. He tells the story of a young David Attenborough, who had a keen interest in 'old bones'. When the young Attenborough stumbled across 'old bones' while out on his explorations he would take them home for his father, a GP, to examine. Attenborough Senior could quite easily have named the various bones that his inquisitive son brought home, instead, however, he would say, ''I don't know maybe we could work it out together''. 'Working it out together' is the very essence of this book.

The Summer Maths Activities Challenge encourages families to negotiate treat days once the book has been completed. This proves a greater incentive for the learner than merely giving out shiny stickers and glossy certificates. Treat days are fun for all the family too!!

The pie chart below illustrates the amount of school work it is recommended your child completes during the summer holidays. This equates to 20 minutes per day or 2 hours per week. It is important that the time spent on The Summer Maths Activities Challenge during the school holidays is balanced and spread across the whole summer holidays, not just 6 hours in the first week followed by 6 hours in the last week.
The Pie Chart should be an important reminder that this is your summer holiday and that maths and reading are just a very small part of enjoying yourselves in the coming weeks.



<u>How you can help your child with Maths this summer</u>

1. Be encouraging! Encourage an inquisitive mind by asking your child questions about how they solved a problem or how puzzles could perhaps be solved in a different way (which they always can).

2. Making a mistake is great! Research has recently shown that the brain actually grows when a mistake is made. Accept mistakes can be made and don't focus on getting the answer correct all the time.
3. It's okay not to know the answer. A critical learning opportunity for children is to see that even adults do not have all the answers. Children

should realise that learning never stops. It is what you do next that is really important - do you walk away because you don't know the answer or do you try to problem solve and figure it out together?

4. Do not share your own mathematical failures with your child or they will start to believe that it is their failure too and this may become a self-fulfilling prophecy. Encourage your child to develop a 'Growth Mindset' about Maths, that is, a positive 'can do' attitude. Your child then believes it is possible to succeed in Maths.

5. Do not emphasise speed. Some of the greatest mathematicians in the world are great because they think about Maths carefully and deeply. Completing activities with a time pressure can cause anxiety and create a negative impression of what it is to succeed in Maths.

6. Play with your child! Board games are a great way to spend time with children and choosing the right board game can provide hours of fun, challenge and learning.

7. Speak 'Maths'. Using the correct mathematical vocabulary with your child will expose them to language they are expected to know. If a 4/5 year old child can learn the names of all the dinosaurs and say them correctly then no mathematical word is too 'long' or 'complicated'.

8. Find Maths in the world around you. Children very often leave school with the impression that Maths only happens during Maths lessons and with a Maths book. Maths is so much more than that. Make your child aware that Maths takes place around us on a daily basis.

RUCSAC

Whenever you are faced with any written mathematical problem always use RUCSAC

R = Read, read through the problem 3 times

U = Underline, underline the key numbers and words

C = Calculation, choose the correct operation, either a mental or written method to calculate

S = Solve

A = Answer, check that you have answered the question. What did you need to find out in the first place?

C = Check, check your answer. Use another method to check your answer

Summer Word Game

Choose a word connected in some way to summer

e.g BEACH TOWEL

Change each letter for a number

B = 2 T = 20
E = 5 O = 15
A = 1 W = 23
C = 3 E = 5
H = 8 L = 12

When you add all the numbers together the total is 94.

Play with a friend or family member. Each player chooses 5 words and works out how much they are worth. Compare scores and the player who scores closest to 100 is the winner.
Alternatively, each player could add their 5 words together and the closest to 500 is the winner.

A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	12	13
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	15	16	17	18	19	20	21	22	23	24	25	26

Ross Edgely

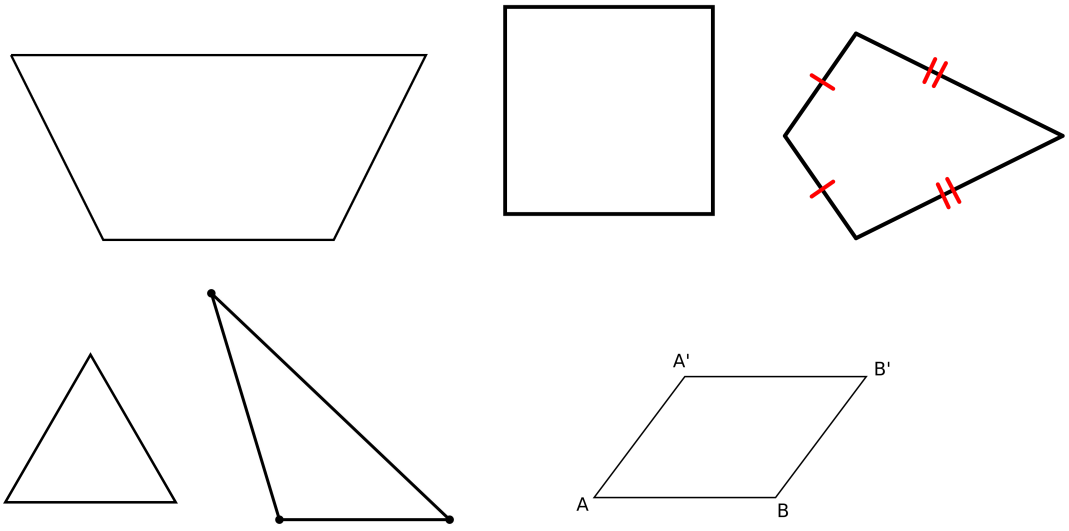
In 2018 Ross Edgely became the first person to do what?

Find 5 interesting statistics or number sentences about what he has achieved.

Angle Colour

Colour in the angles

Right angles	= Red	90 degrees
Acute	= Blue	Less than 90 degrees
Obtuse	= Yellow	Between 90 - 180 degrees
Reflex	= Pink	Larger than 180 degrees

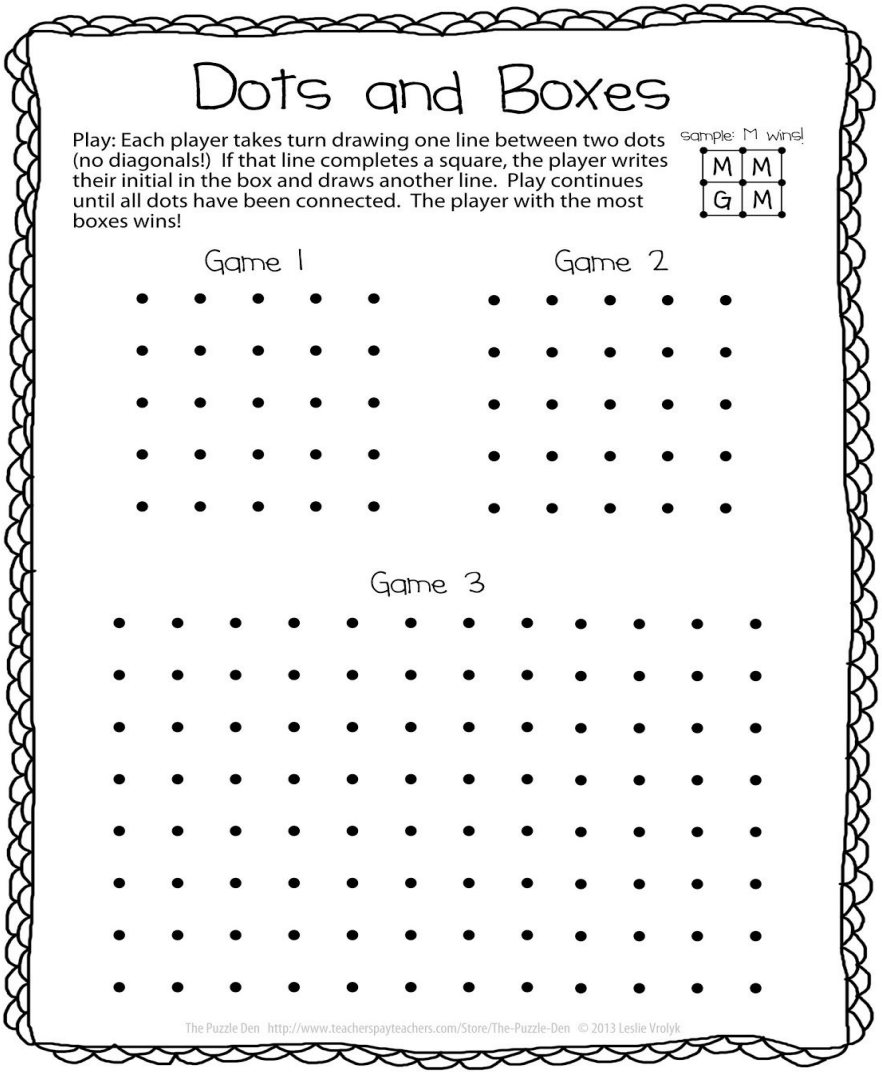


Draw a shape with acute, obtuse and reflex angles.

Boxes

This is a game for 2 players

Rules: Players take turns joining two horizontally or vertically adjacent dots by a line. The player who completes the fourth side of a box (a square) puts their initials in the box. This player then plays again. The game ends when all of the boxes have initials in them. The players total the number of boxes they have collected and the winner is the one with the highest final total. As an alternative mode of play, the players could keep a running total as they progress through the game.
You can photocopy this page to play again or you can design your own.



This page can also be used to play the boxes game. This time when you complete the box you gain the score inside. Be careful as some of the numbers are negative. The winner is the person with the highest score.

Castle Visit

Lily, Sam, Emily and William visit a castle.

1. The castle was built in 1076. How long ago was the castle built?
2. Can you find out who might have built it and why?
3. The cost to get into the castle is £3.50 per person. The group also bought a guide book for £4. How much did they spend altogether?
4. The guide book told of a siege that took place at the castle in 1317. How long ago was this?
5. The siege started on February 7th and ended on March 25th. How many days did it last? (was 1317 a leap year?)
6. The guide book also said the walls of The Keep are 12 inches thick. How thick is this in centimetres?
7. The National Trust took over the castle in 1952. How many years ago was this?
8. To get to the highest point you have to climb 100 steps. Each step is 20 cm high. How high up are you at the top of the tower?

Making Flapjack

100g margarine
60g sugar
1 tablespoon syrup
150g oats

Method

1. Weigh and measure the first 3 ingredients.
2. Put these ingredients into a pan and heat until the sugar melts.
3. Weigh out the oats and then add them to the pan.
4. Mix the ingredients with a spoon.
5. Bake in an oven for 30 mins at 180 C / 350 F. Gas Mark 4

Cool, cut and enjoy.

Make three times the amount of Flapjack compared to the recipe. Write down the amount of each ingredient you would need.

Always work with an adult

Number Puzzles

Complete the table below. The first few have been completed for you

	+7	-9	+14	-20
24	31			4
48				
39				
52				
69				
75				
80				

Make your own table for a family member or friend to complete. You can choose any numbers to add, subtract or multiply along the top of the table

Add and Subtract Snap

This is a game for 2 players.
You need a pack of playing cards.
Aces = 1
Jacks =11
Queens = 12
Kings = 13
Jokers = 20
Deal the cards between the 2 players.

Each player turns over their top card. The first player to add the 2 numbers and call out the correct answer wins the cards.
The winner is the player who ends up with the most cards

You can also play subtraction by taking the smallest number away from the largest number.

Dice Challenge

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

This is a game for 2 people
You need 3 0-9 dice and a coloured pencil each.
Player 1 throws the 3 dice. Make as many numbers as you can by adding, subtracting, multiplying and dividing. Colour in all the numbers you have made, with your coloured pencil.
Player 2 throws the 3 dice and makes as many possible sums and colours in her answers with her coloured pencil.
Once a number is coloured it cannot be used again.
You play for 10 throws or a set time e.g 10 mins
The person who has coloured the most squares is the winner.

Money

Show 6 ways of making 50p

	1p	2p	5p	10p	20p	50p	£1
1	50						
2							
3							
4							
5							
6							

Can you find other solutions?

Show 6 ways to make £1

	1p	2p	5p	10p	20p	50p	£1
1							1
2							
3							
4							
5							
6							

Can you find other solutions?

Spot the Sign Game

This is a game you could play on a journey in the car or on the bus.
Each person looks at one side of the road.
You are looking for road signs.
Every time you see a square or rectangle sign it is worth 2 pts.
Every time you see a triangle it is worth 3 pts.
Every time you see a circle it is worth 4 pts.
Every time you see any other shape it is worth 5pts.

You can keep a tally if there are lots of signs and work out points at the end of the journey.
The person with the highest score at the end of the journey is the winner.

Strawberry Picking

Charlie and Samuel go strawberry picking with their family.

1. It takes Charlie and Samuel 18 mins to fill one container of strawberries between them. How long would it take if they each fill their own individual container?
2. How long would it take to fill 6 containers if they work together?
3. Charlie ate one strawberry for every 5 he put in the container. How many strawberries did he eat if he has 60 strawberries in his container?
4. Samuel picked 2 kg 400g of strawberries and his little sister picked a ¼ of this. How much did Samuel's sister pick?
5. They started strawberry picking at 3.20 pm and worked for 45 mins. What time did they finish?

   This is the weight of strawberries each person picked

Dad	1 kg 500g
Mum	2 kg 300g
Sam	2 kg 400g
Charlie	1 kg 600g
Sister	?

6. Work out from Q4 how much Samuel's little sister picked and add up the total for the whole family.
7. Mum decided they had picked too many strawberries and that she only actually needed 5 kg. How much weight did the farmer take from the families total?
8. The cost of the strawberries were £1.20 per kg. How much did the family pay?
9. At the supermarket the price was £2 per kg. How much money did the family save by picking their own strawberries?
10. When she got home mum used ⅘ to make jam.
    How many kgs of strawberries was this?

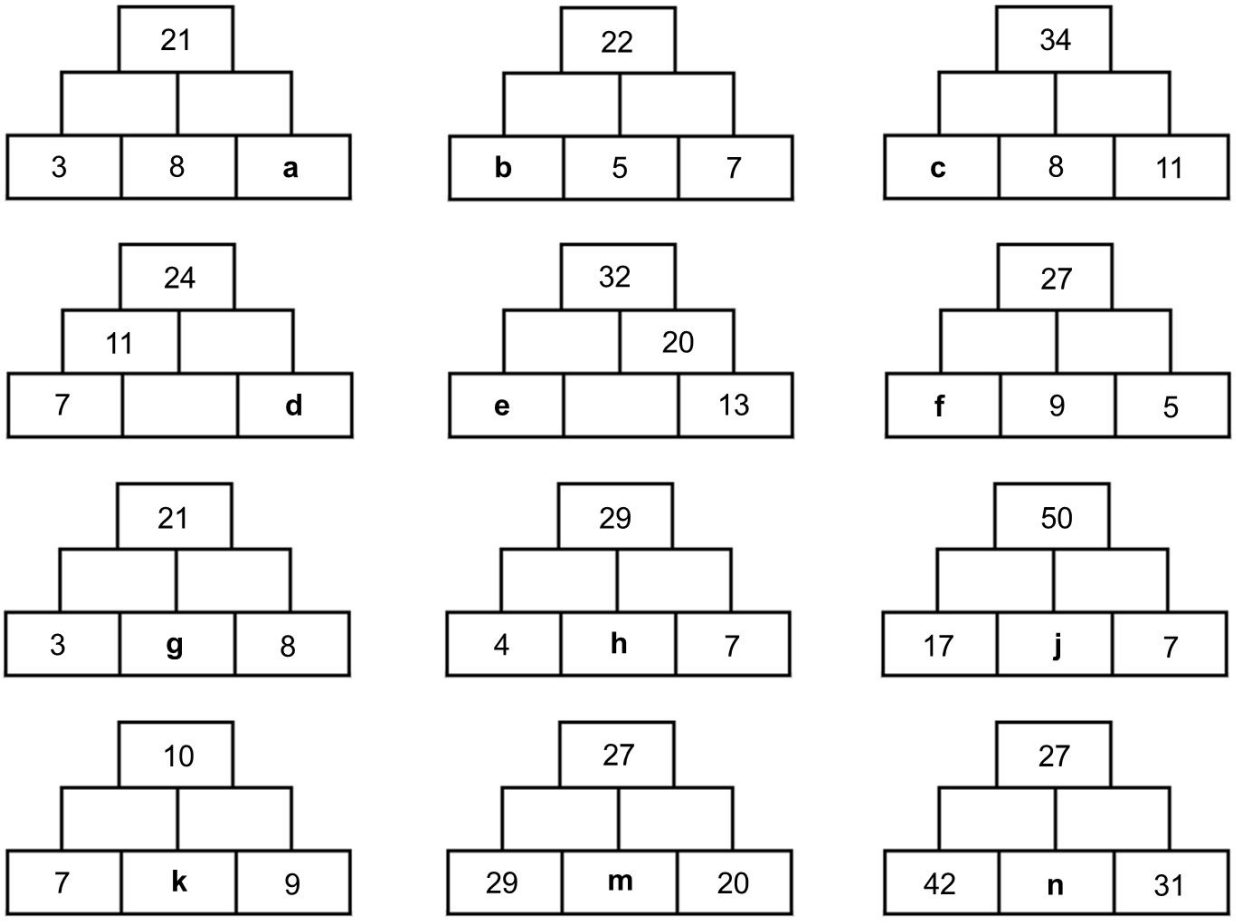
Addition Pyramids

In the first example add the first 2 numbers at the base of the pyramid 3 + 8 = 11. You now know the brick above is 11.

The other brick on the second row must be 10 as 11 + 10 = 21 the top number. So the bottom right brick must be 2 as 8 + 2 = 10

Have a go you may need some help with the last few pyramids, get an adult to help.

Hint k is a negative number



Adding and Subtraction

1. 350 + 240 =
2. 83 + 50 =
3. 1060 + 120 =
4. 430 - 80 =
5. £6 - £5.20 =
6. 64 - 38 =

Choose 2 single digit numbers
Write the 2 numbers eg. 6 and 5
Find the sum 11
Find the difference 1
Take these 2 answers away 11 - 1 = 10
Compare this answer with the original 2 numbers 10 6 5
Do this 5 times. Can you find a pattern?
Try the same thing 5 times with different 2 digit numbers.
Do you get the same pattern?

Lego Challenge

Using 25 white bricks
30 red bricks
10 yellow bricks
20 blue bricks
10 green bricks
5 own choice brick

Make an interesting model from these bricks. Write the fraction for each colour of brick you have used in your model.

Cafe

Thomas, Alex and Ollie go to a cafe

Milkshake	£1.80	Burger	£3.60
Hot Chocolate	£2.10	Nuggets	£2.40
Fanta unlimited	£3.00	Sandwich	£2.75
Diet Coke	£1.40	Lasagne	£3.90
Water	£0.90	Ham Salad	£3.30
Jug of Squash	£2.00	Breakfast	£4.25
Ice cream float	£2.65	Fish and Chips	£5.00
Coffee	£2.20	Chips	£1.50

Thomas buys a diet coke and lasagne

Alex buys a hot chocolate and a sandwich

Ollie buys an ice cream float and nuggets

1. Work out each person's bill.
2. How much did they spend altogether?
3. Work out the cheapest meal they could buy.
4. Work out the most expensive meal they could buy.
5. What would you choose from the menu?
6. How much change would you get from a £10 note?

Ask your family what they would choose and work out the cost for each person and then for the whole family.

Paper Aeroplane Challenge

Everyone in your family must design and make a paper aeroplane.
Before you test them get each person to predict which aeroplane they think will fly the furthest.
Each person has 3 throws. Measure and record all three throws.
Which plane travelled the longest distance on 1 throw?
Was this the same plane when you added all 3 throws together?
Why do you think this plane was the winner?
Could you do the same experiment inside? Do you get different results?

Making 12

Use the digits 1, 2, 3, 4, 5, 6, 7, 8, 9, 0 to make 12.
Only use each digit once in each sum
And +, -, X and ÷. *These signs can be used more than once.*

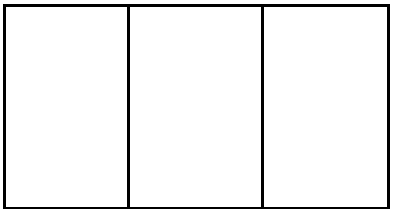
eg. 6 + 3 + 2 + 1 = 12

How many ways can you make 12?

Flags

Using colours blue, green and yellow find all the possible combinations. You can only use each colour once in each flag.

Does it make any difference to the results if we change the flag?

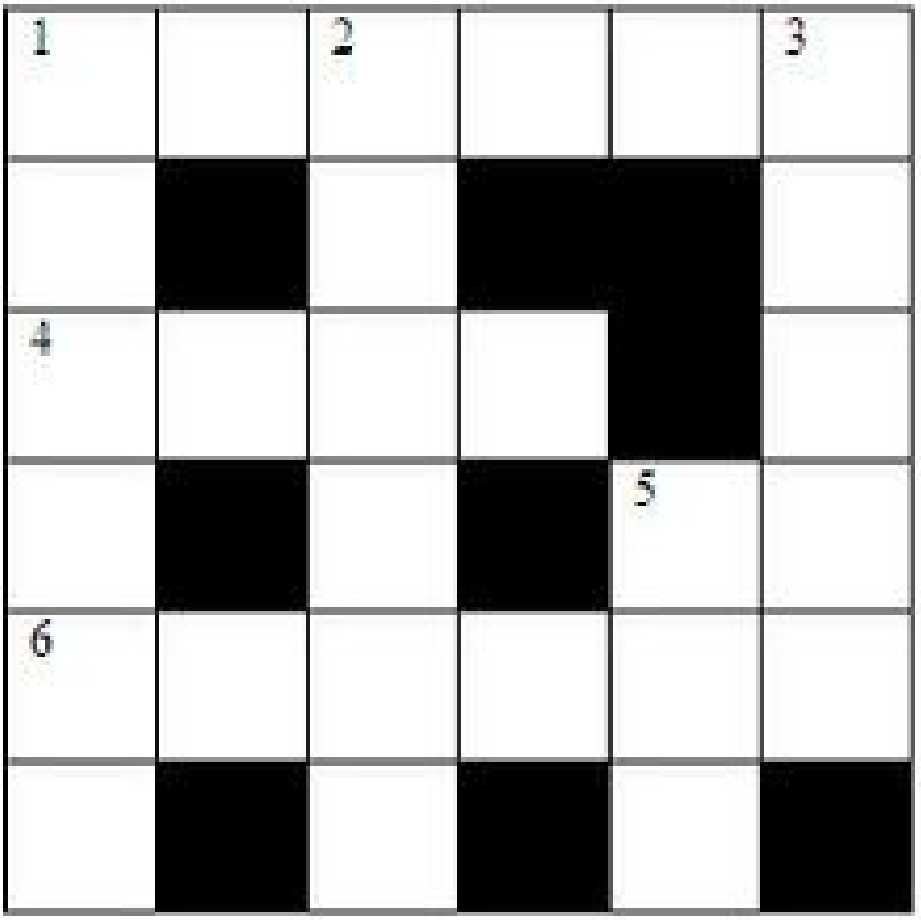


Now do something similar using blue, green, yellow and pink.

What flags can you find that have 3 blocks of colour? The colours do not have to be the colours you used. Can you find a country with a 4 block flag

e.g Here is the flag of the Republic of Ireland.

Crossword



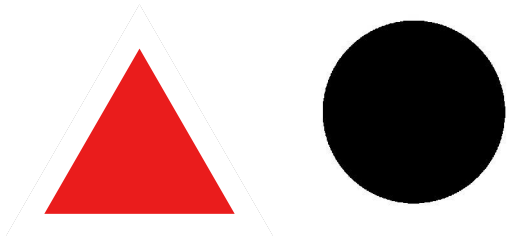
Across

1. 2769 x 100 =
4. 3419 + 1834 =
5. 100 - 54 =
6. 200,000 + 200,000 =

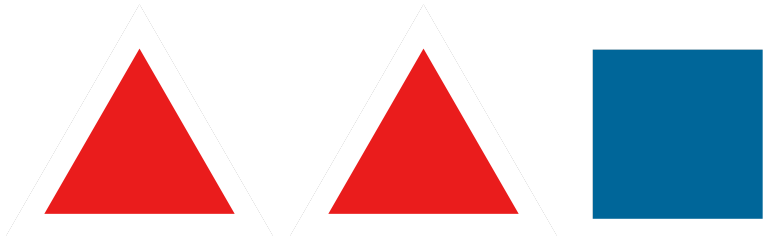
Down

1. 218,136 + 7513 =
2. 63510 x 10 =
3. 37560 - 31200 =
5. 800 ÷ 2 =

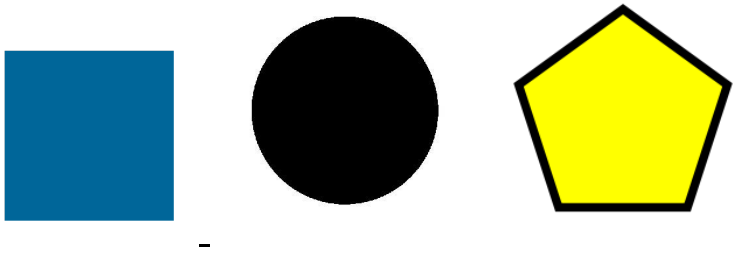
Shape puzzle



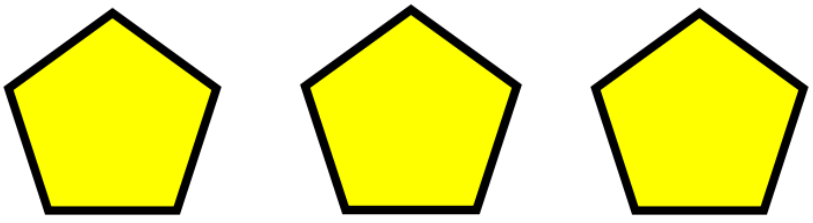
Triangle = 6
Circle = 15



Total = 32



Total = 52



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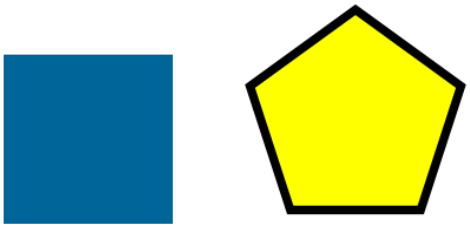

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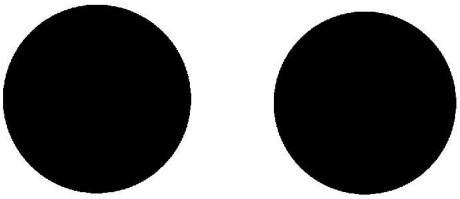

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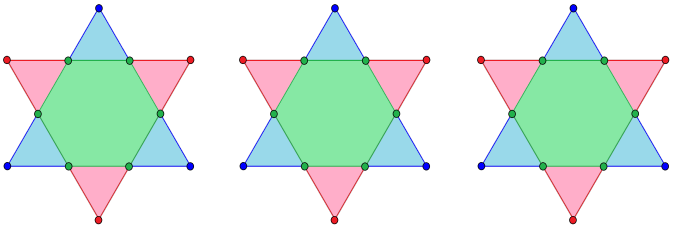

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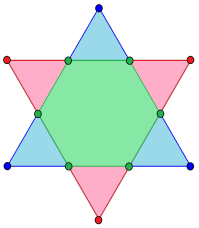

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Make up your own shape puzzles

Multiplication Grids

Fill in the grids

X	2	4	6
3	6		
5			
10			

X	4		
6		18	36
	40		
5			

Make up your own multiplication grid

Olympic Games

Organise your own Olympic Games in your garden or nearby park for your family and friends.

Possible events could be:
Running races
Standing Long Jump
Welly throwing
Egg and spoon relays
Bowls
Bucket filling
Three-legged races
Hurdle races
Obstacle races

Can you think of other events?
Make up a handicap system to make it a fair contest
Make sure you measure and time your events accurately!!!!

Riddle Page

1. A girl was 10 on her last birthday and will be 12 on her next birthday. How is this possible?
2. What number do you get when you multiply all the numbers on a telephone keypad?
3. How many days are there in 4 years?
4. What did one Maths book say to another Maths book?

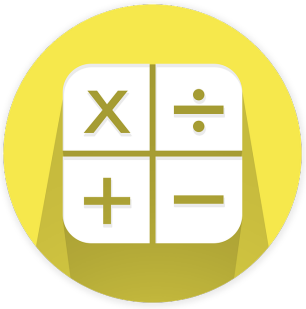
Sandcastle Problem

Sam goes on holiday for 5 days. In those 5 days, he makes 60 sandcastles.
Each day he makes 4 fewer sandcastles than the previous day. How many sandcastles does he make on each day?

Tug of War Dice Game

For this game, you need two people and 2 dice, either 1-6 dice or 0-9 dice. The players decide on a starting score e.g 20
Player 1 throws the dice and always subtracts the number shown from the starting score. Player 2 always adds the number shown on the dice to the running score.
So if the score starts on 20 Player 1 wins if the score reaches 0 and player 2 wins if the score reaches 40.
Change who adds and who subtracts.

Find The Number



Sum means to add and product means to multiply

1. Find a pair of numbers with a sum of 10 and a product of 21
2. Find a pair of numbers with a sum of 12 and a product of 35
3. Find a pair of numbers with a sum of 10 and a product of 16
4. Find a pair of numbers with a sum of 10 and a product of 25
5. Find a pair of numbers with a sum of 12 and a product of 27

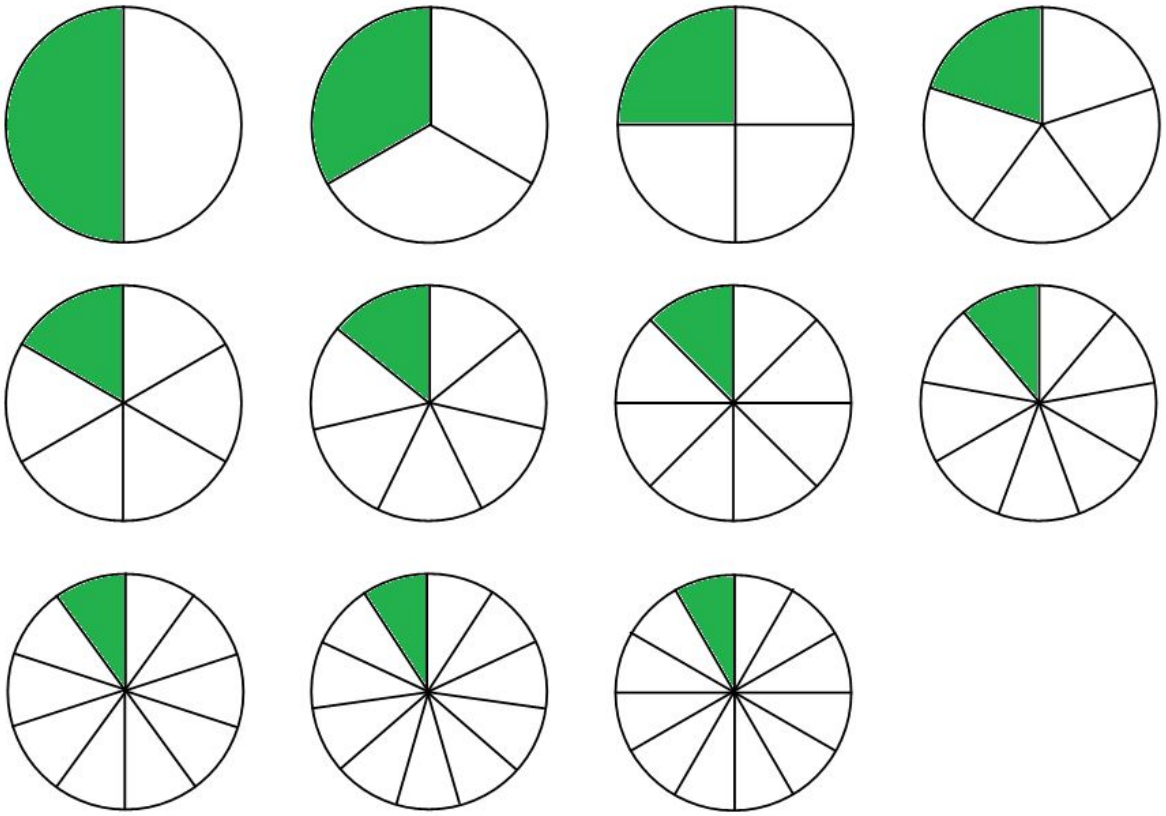
   Write 5 more similar questions

Mental Revision

1. What is 100 less than 873
2. What is 9 times 3
3. William has 54p, he spends 16p. How much does he have left?
4. Take 300 from 731
5. How many faces does a cube have?
6. If 3/10 of a cake is eaten how much is left?
7. Ice creams cost 80p. How much would 3 cost?
8. How many 2p coins make 48p?
9. How many minutes in 2 hours 10 minutes?
10. Halve 64
11. What is 9 more than 132?
12. How many edges does a square pyramid have?
13. Raffle tickets cost 30p. How much would 10 cost?
14. 4 people share £120. How much do they get each?
15. How many 6's in 66?
16. What is 60 less than 213?

Fraction Revision

Circle the circles that show ⅓, ⅕, ⅛. 1/11,



Use these signs <, >, = when comparing fractions

½ ⅙

⅛ ⅕

5/7 7/7

5/9 2/9

⅓ + ⅓ =

¾ - ¼ =

1 = ¼ +

1 = ⅗ +

1. What fraction do you reach if you start at one-fifth and count on three-fifths?

2. I have completed 47 pieces of a 100 piece jigsaw puzzle, show this as a fraction

3. 4/9 of a class are boys. What fraction of the class are girls?

4. Write 3 fractions that are equivalent to ¼

5. ⅕ of 15 =

6. ⅖ of 20 =

7. ⅗ of 10 =

<u>How Old?</u>

Work out the ages of the 4 children in Jessica's family from the clues below.

Joshua is younger than 12

The twins Georgia and Rebeca are more than 2 years younger than

Joshua and 2 years older than James

James is older than 5 and his age is a multiple of 2

Joshua is? Georgia is? Rebeca is? James is?

Build a Marble Run

Build a marble run so that a marble always takes the same amount of time to go from top to bottom.

You can use simple materials like toilet rolls, paper, lolly sticks, lego There are some great ideas on the web if you are stuck.

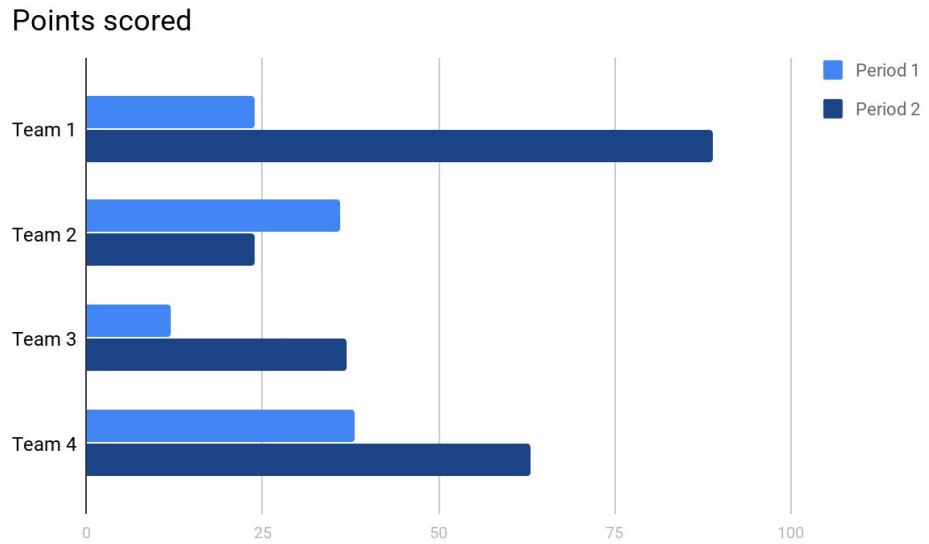
If you get stuck ask a friend or family member to help you.

Bar Graphs

Sport	Votes
Football	12
Netball	6
Rugby	5
Hockey	10
Gymnastics	6
Cricket	8

Lawrence and Clem ask the children in Year 3 what is their favourite sport.
Draw a bar chart to show these results.

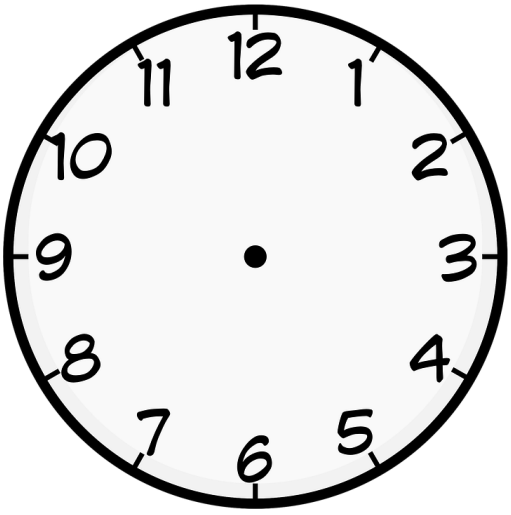
Throw 2 dice throw them 50 times and record your results in a frequency chart. Then record your results in a bar graph.

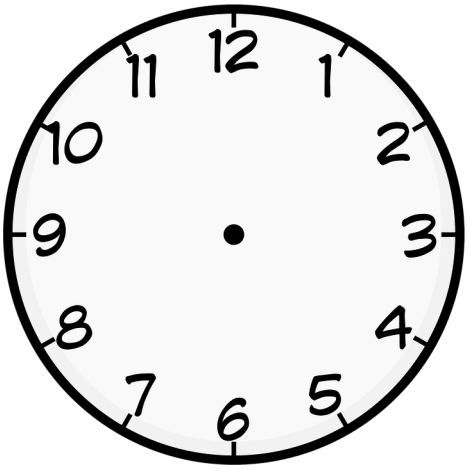


Look at the above bar chart
What do you think it is showing? Explain your answer to a parent.

Measure Review

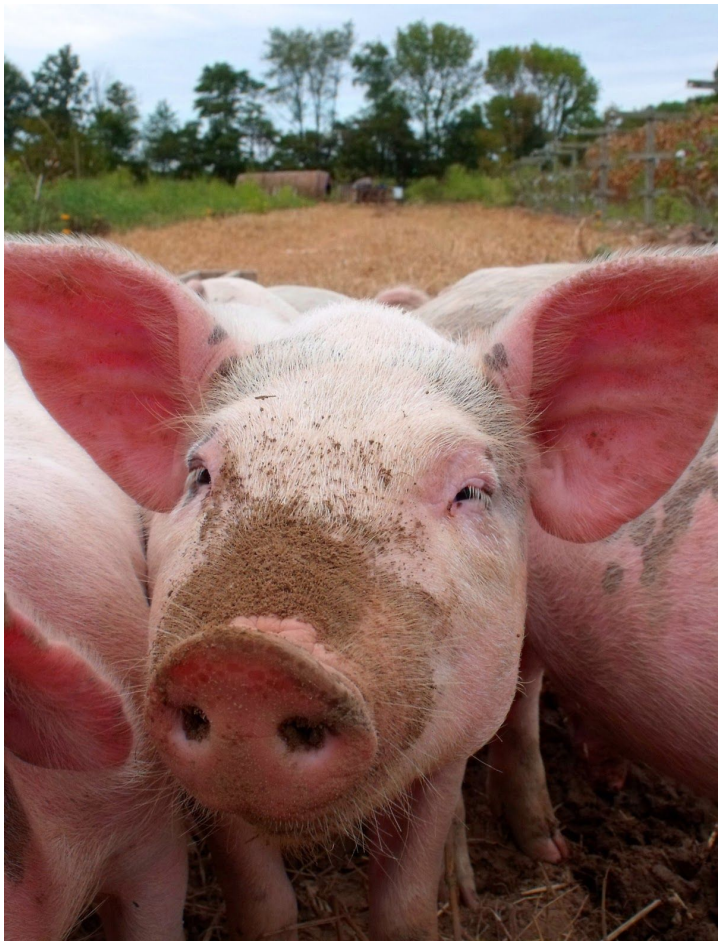
1. 3 mins = secs
2. 100 mm = cm
3. 3m 6 cm = cm
4. 1 kg 300 g = g
5. 2 km 250 m = m
6. 60cm + 50 cm =
7. 500 mls - 60 mls =
8. 67g + 39 g =
9. 220 m + = 1 km
10. How many seconds in 2 minutes?
11. How many minutes in 1 ¼ hours?
12. Oliver watches a TV programme which starts at 3.15 pm and lasts for 50 mins. What time does the programme finish?
13. Jack and Catherine row 900 m down a river and then row back up to their starting point, how far have they rowed altogether?
14. A glass jar contains 467 mls of milk. If 90 mls of milk is poured out how much milk is left in the glass jug?





Draw 2.35 on the first clock face
Draw the time 1 hour 10 mins later on the next clock.

Pig



To play Pig you will need a dice and at least 2 people.

The first person throws the dice and if they throw 2,3,4,5 or 6 they gain that number of points.

As soon as the number 1 is thrown the player loses all of the points they have gained.

Each player can protect their points by banking them at any time and let their opponent throw again.

Banked points cannot be lost.

The winner is the first player to reach a set total, for example, 50 or 100.

Number Stories

1. Ryan's birthday is in 22 days time
   $22 \div 7 = 3\ weeks\ 1\ day$

2. Miss Moy is ordering Maths books for the start of the new school year. She has 27 pupils in her class and each child needs 3 books. So she orders 81 books
   27 X 3 = 81

Above are 2 number stories
Write a number story for the following calculations:

$64 \div 4 = 16$
23 + 32 + 54 = 109
100 - 42 = 58
12 X 3 = 36
$43 \div 5 = 8\ r3$

Mathematical Anagrams

An anagram is a word that has had its letters mixed up.
Unjumble the following anagrams to make mathematical words.
The first one has been done for you
DDA = ADD
TTLOA =
LUPS =
VIDSINOI =
INMUS =
ORTHN =
EMIL =
EMPTREIER =
CTUAE =
MGRA =
ASWREN =

Make up some of your own anagrams for your family and friends to try.

Kayaking Adventure

Ayo, Charlie, Amelia and Sophie went Kayaking at their local river.

1. A kayak costs £6 each to hire and they each had to pay the instructor £10 an hour. How much did they pay altogether for a 3 hour trip?
2. Ayo takes 4 paddles to travel 10 m. How many paddles would he need to do to travel 100 m?
3. The instructor took half the paddles when compared to Ayo. How many paddles does he take to go 100 m?
4. They have a race over 100 m here are their times:

   Ayo 58 sec
   Charlie 43 sec
   Amelia 41 sec
   Sophie 67 sec

   Put the children in race order by placing the winner first.
   How much quicker was Amelia than Ayo?
5. In the afternoon they went for another paddle.
   Draw a map to show their journey, with 1 square for every 100 m travelled.
   They paddled South 800 m, then West 300 m, South 400 m and East 600 m.
6. How far did they travel?
7. They have to return to their starting point. Give directions to help them get back to the start.
8. At the end, they were all allowed to jump into the river as they had life jackets on. Sophie jumped twice the distance of Ayo, who jumped twice the distance of Charlie and Charlie jumped twice as far as Amelia. How far did Sophie, Charlie and Ayo jump if Amelia jumped 30 cm.

Three by Three Squares

1	7	5
3	8	6
4	2	9

Make 2 digit numbers horizontally,
17, 75, 38, 86, 42 and 29
Add these numbers up

Make 2 digit vertical numbers
13, 34, 78, 82, 56 and 69
Add the numbers

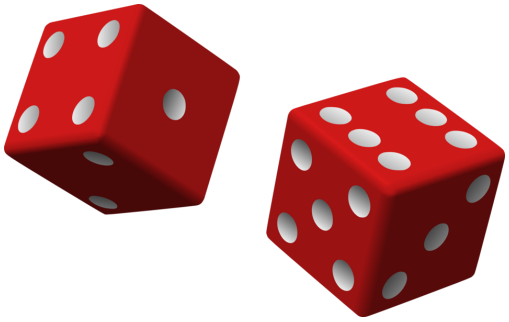
What is the difference between the 2 totals?
Add the 2 totals
Put the numbers in different orders in the 4 boxes below. What is the largest and smallest totals?

Snail Problem

A snail falls down a 30 m well. Every day he climbs 5 m up the well wall. Every night he slides down 2 m.

How long will it take the snail to get out of the well?

Making 100



Nikolina and Elke throw 2 dice and make a 2 digit number
The first example in the table below shows that 6 and 3 were thrown to make ‘63’

Work out what number you would need to add to this number to make 100.

In the second part of the table throw two dice and make a 2 digit number and take this number away from 100

63	+		=	100
	+		=	100
	+		=	100
	+		=	100
	+		=	100
	+		=	100
100	-		=	
100	-		=	
100	-		=	
100	-		=	
100	-		=	
100	-		=	

Balloon Rocket Race

Daisy and George are going to make a balloon rocket

They will need
Balloons
A piece of string or fishing line
A plastic straw
Tape

Make your balloon rocket
Tie one end of your string to a chair or door handle in the house.
Put the other end of the string through the straw.
Pull the string tight and tie to another support in the house.
Blow up the balloon, but do not tie it. Tape the balloon to the straw
Let go and measure how far it goes.

Experiment with different balloons, strings and straws to find out the best combination that will send the rocket the furthest.

Car Park Challenge

Your job is to design a new car park.
There must be space for 60 cars.
There must be the same number of cars on each level.
You need to find as many different layouts as you can.
Pick a larger number of cars and make new designs for your car park.

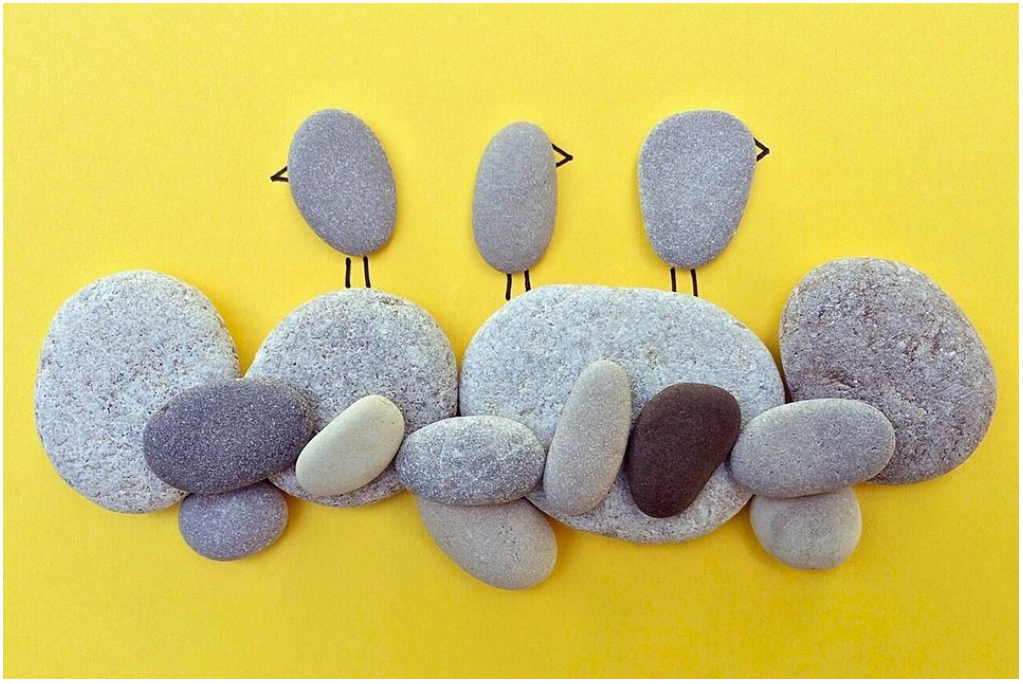
The Seaside

Lucia, George, Lara and James are going to the seaside.

1. The train fare is £5.50 each how much do they pay altogether?

2. The train station is 1 km from the beach, they catch a bus that drops them 100 m from the beach. How far did they travel on the bus?
3. Lucia and George built twice as many sandcastles as Lara, who made twice as many as James. How many sandcastles did each child build if Lara built 6 sandcastles? How many sandcastles did they build altogether?
4. They buy ice creams. The ice creams cost £1.80 each. How much did they spend on 4 ice creams?
5. They went into the sea. Lara swims 30 m, James swims 25 m, George swims 40 m and Lucia swims 50 m. How far did they swim as a group?
6. They arrive at the beach at 10.05 am and stay for 2 ½ hours. What time did they leave?
7. On the pier, they won 180 tickets between them. How many tickets would they each get if they divided them equally?

Next time you go to the beach search for some stones and shells you can use for artwork when you get back home



Send a picture of your completed artwork to summermathsactivitieschallenge@gmail.com with your details. The best artwork sent in by the end of the holiday will win a family trip to your nearest cinema.

Puzzle Corner

Remember a row goes across and a column goes up and down.

7	6	0	3
9	5	2	8
1	7	4	10
8	9	1	5

1. Find the total of row 1
2. Find the total of column 4
3. Add the two diagonals together
4. Add column 1 and subtract row 4

Find these 4 numbers and unjumble them to make a multiplication equation

e.g
The first number in row 2 = 9
The first number in column 1 = 7
The second number in row 3 = 7
The third number in column 3 = 4
Unjumble the numbers to make 7 x 7 = 49

The second number in the second row
The first number in the second row
The fourth number in the fourth row
The third number in the third column

The third number in the third column
The fourth number in the first row
The last number in the second row
The second number in the third column

Have a go at these 4 number combinations:

4 1 6 4 4 x 4 = 16

2 7 8 4

6 4 8 8

4 9 5 6

6 6 6 3

5 6 7 8

1 1 1 2 1 1 1

2 4 4 6

9 7 2 8

9 6 7 3

Make up your own questions for another member of your family to solve.

Place Value Game

This is a game for 2-4 players
Player 1 rolls a 0-9 dice
They choose which column to put their number in
When all players have rolled the dice 4 times each person has a 4 digit number.
The person with the largest number gets a point.
Play until a player reaches a set number of points agreed at the start of the game.

Thousands	Hundreds	Tens	Units

Multiples

Colour any multiple of 2 Yellow
Colour any multiple of 3 Green
Colour any multiple of 5 red

Some numbers will have more than 1 colour.

What colours will 30 have?

3	18	4	17	21	6	20	39
10	5	16	19	32	27	29	40
50	25	15	13	22	31	56	60

Fill in the rest of the boxes with numbers and then colour in the boxes with the correct colours.

Mad Multiples

0 2 3 5 7 8

Only use these 6 digits to make three 2 digit numbers. Each digit may only be used once.

One number must be a multiple of 2; one a multiple of 5; and the last one must be a multiple of 10.

Find different solutions?

Is it possible to make multiples of 2,3 and 5?
Is it possible to make multiples of 2, 7 and 10?

Handshake Problem

Below is a picture of Jack, George, Thomas and Kishen. If everybody has to shake everyone else's hand how many handshakes would there be?
What if Haqim joined the group how many handshakes would there be now?

Four in a Row Add Game

A game for 2 players
Each player takes it turns to throw 2 dice (1-6) and adds the numbers together.
The player then finds that number on the board and covers it with a counter. If that number is not available then the next player throws.
The winner is the first player to cover 4 numbers vertically, horizontally or diagonally.

6	3	10	7	9	4	8
11	7	6	2	7	5	12
8	5	9	10	3	6	4
7	6	2	12	5	8	11
4	3	6	8	9	2	7
11	5	4	10	7	6	3
9	12	6	2	9	7	8
5	4	10	3	6	9	7

Answers for all the problems and questions in the book can be accessed at www.summer-maths-activities-challenge.com
If you have enjoyed the Summer Maths Activities Challenge why not check out some of the following websites for some great maths ideas
https://mathsticks.com/my/

Useful Maths websites for Primary School