

# Don't Forget Your Maths Pack!

20 Fun Holiday Maths Challenges

Year 4 to Year 5

## Note to Children

Hooray! It's the summer holidays!

You've worked so hard this year, and learnt so many new things in Year 4 you deserve a big pat on the back. You also deserve to be able to start Year 5 in September still knowing what you know now – and not forget 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 challenges in this special Don't Forget Your Maths! Pack. As well as being lots of fun, the challenges will help make sure all of the amazing maths that you have learnt in Year 4 sticks in your brain ready for your new learning adventures in Year 5.

Simply tick the challenges you have attempted and bring this pack back with you when school starts again in September!

Have fun!

## Note to Parents and Carers

The summer holidays are finally here! Your child has worked hard all year learning all the maths we expect Year 4 pupils 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 learnt and have some fun maths activities to keep them going over the summer!

There is lots of evidence that doing just a little bit of maths practice over the summer holidays will make it much, much easier for them to start the next term in September.

The challenges 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 holidays.

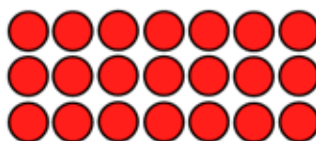
We're setting a target for your child to complete 10 over the holiday which is only a couple of challenges a week. If children are struggling with their maths, just knowing that they can tick off a handful of challenges over the holidays will really boost their confidence and success when they move into Year 5 next term. Other children may want to do more and really push themselves. Do what's right for your child.

When they've done each challenge, do please date and sign it so the child knows it's important.

Thank you for your support, and we hope you and your child has fun with the challenge!

## 1 Hunting for Arrays

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  $3 \times 7 = 21$ . However, arrays are amazing – because of the commutative law, this array shows  $7 \times 3 = 21$  too. Finally, we can also see  $21 \div 3 = 7$  and  $21 \div 7 = 3$ !

### Your challenge:

- Can you spot at least eight arrays ‘out and about’ over the holidays?

### How to play:

- Record the arrays you have spotted on your Challenge 1 Sheet.
- Write down 4 maths facts that each one shows on your Challenge 1 Sheet.
- You may even want to draw each array that you find!

### You will need:

- Challenge 1 Sheet

Completed on (date):

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Adult's initials:

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## 2 Place Value Duel

### Your challenge:

- Can you make a larger four-digit number than your partner?

### How to play:

1. Get your digit cards ready. Cut them out from the Digit Cards Resource Sheet (at the back of this pack).
2. Shuffle all three sets of the digit cards. You and your partner must each draw four big lines on your sheet of paper like this:

\_\_\_\_\_

3. Take it in turns to turn over a digit card and decide where in your number you are going to place the digit.
4. Put the digit in that position and tell your partner what value that digit has. For example, if you put a 3 in the tens column, you would say ‘this 3 is worth 3 tens or thirty’.
5. Once you have placed a digit in your number, you can't move it! Therefore, it's important to think about the strategy you are using. Play at least seven rounds.

### Who will be the champion?

I played with \_\_\_\_\_

The person who won was \_\_\_\_\_

### You will need:

- Digit Cards Resource Sheet
- Two sheets of plain paper
- A partner

Completed on (date):

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Adult's initials:

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### 3 Multiplication Mosaic

**Your challenge:**

- Can you use your multiplication skills to reveal the picture hidden in the grid?

**How to play:**

1. Work out the answer to the calculation in each square using your knowledge of the 1-12 times tables.
2. Colour in each square based on the key at the top of the sheet.

What picture will you reveal?

**You will need:**

- Challenge 3 Sheet
- Colouring pencils or felt tips

Completed on (date):

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Adult's initials:

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### 4 Who Creates the Most Washing

**Your challenge:**

- Can you find out who creates the most washing in your house?

**Things to remember:**

1. This one involves helping out with the washing for a week. (Sorry!) Families generate a LOT of washing, right? But who in your house generates the most washing?
2. Before you begin, predict who you think will create the most washing over the next week.
3. I think that the following person will make the most washing:  

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4. Over the next week, use Challenge 4 Sheet to record your results. In the table, record how many items of washing each person in your house generates in the table. Think about how you can record this data – will you use a tally?
5. Next, create a bar graph of your results.
6. Then, write down five things you can tell from the data on your Challenge 4 Sheet. For example, who creates the least washing? Who creates the most washing?
7. The person who created the most washing was  

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**You will need:**

- Challenge 4 Sheet

Completed on (date):

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Adult's initials:

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## 5 Multiplication Skirmish

**Your challenge:**

- Are you ready to have a multiplication skirmish?

**How to play:**

1. This game is simple, but addictive! Shuffle all three sets of digit cards from the Digit Cards Resource Sheet, then deal them between the two players.
2. At the same time, each player turns over one of their cards and puts it in the middle.
3. Race your partner to shout out the answer that you get when you multiply both the numbers together. For example, if you turned over an 8 and your partner turned over a 6, you'd have to shout out 48, because  $8 \times 6 = 48$ .
4. The person who shouts out the correct answer first gets to keep both cards. Keep playing until one player has run out of cards.
5. Play at least three rounds. Who will be the champion?

I played with \_\_\_\_\_

The person who won was \_\_\_\_\_

**You will need:**

- Digit Cards Resource Sheet
- A partner

**Completed on (date):**  
\_\_\_\_\_

**Adult's initials:**  
\_\_\_\_\_

## 6 Playing Games With Maths

**Your challenge:**

- Find the maths in your favourite board or card game.

**How to play:**

1. While you are playing it, have a think about all the maths skills you are using!
2. Search hard – most games do involve some maths somewhere, but if your favourite game doesn't, then try your second favourite game!

The game I played was \_\_\_\_\_

The maths I spotted in it was

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**You will need:**

- Your favourite board or card game to play
- People to play it with

**Completed on (date):**  
\_\_\_\_\_

**Adult's initials:**  
\_\_\_\_\_

## 7 Get Arty!

### Your challenge:

- Get ready to create a piece of art that is symmetrical.

### Things to remember:

1. Your piece of art needs to have at least one line of reflective symmetry. Remember, this means that one (or more) parts of the image would be identical after a flip (or reflection in a mirror).
2. You can create your artwork using any type of materials you like – you could create a collage, paint, colour or do anything else – it's up to you.
3. Simply bring your piece of art in with your challenge sheet! Have fun being arty!

### You will need:

- Plain paper
- Art materials

Completed on (date):

Adult's initials:

## 8 The Great Maths Bake Off

### Your challenge:

- Bake something tasty and find the hidden maths.

### What to do:

1. Cooking is so much fun! But did you know it involves a lot of amazing maths too?
2. Work with an adult to bake something yummy. Need an idea of some recipes? Head to [bit.ly/TSLrecipes](https://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 maths skills did you think you used!?
3. Don't forget to then taste what you have made!

### You will need:

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

I made: \_\_\_\_\_  
\_\_\_\_\_

The maths I used was  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Completed on (date):

Adult's initials:

## 9 Two-handed Maths, Paper, Scissors

### Your challenge:

- Have you ever played 'Rock, Paper, Scissors'? Well this is a maths version of the same game!

### How to play:

1. Stand and face your partner. Make two fists and say together with your partner 'maths, paper, scissors' whilst moving your fists up and down (in a similar way to when playing rock, paper, scissors).
2. On scissors, each of you puts out between 1 and 10 fingers.
3. You then need to race to multiply the number of fingers you have put out by the number of fingers your partner put out (e.g.  $6 \times 8$ ) and call out the answer.
4. The player to call the correct answer first, wins a point.
5. Record who wins each 'battle' in a simple table; the first player to 15 points wins!

I played with \_\_\_\_\_

The person who won was \_\_\_\_\_

### You will need:

- A partner

Completed on (date):  
\_\_\_\_\_

Adult's initials:  
\_\_\_\_\_

## 10 Mystery Times Tables

### Your challenge:

- Can you help solve a times table mystery?
- On Challenge 10 Sheet there are two times tables that have been written in code. Each digit has been replaced by a letter and the times tables have all been jumbled up!

### What to do:

1. Can you work out which digit each letter stands for? Try to spot patterns in the digits so you can rule out certain numbers and rule in others.
2. Can you work out which times table is the 11 times table or the 1 times table? Does the number of single digit answers help you work out which times table it could be?
3. Solve the puzzle and record which digit each letter stands for on the challenge sheet.

Set 1 times table (Z) is \_\_\_\_\_

Set 2 times table (A) is \_\_\_\_\_

### You will need:

- Challenge 10 Sheet

Completed on (date):  
\_\_\_\_\_

Adult's initials:  
\_\_\_\_\_

## 11 Product Hunt

### Your challenge:

- How many products can you make out of 4 digits?

### How to play:

1. You have the digits 4, 5, 7, and 8. You need to arrange them into a multiplication question like this:  $HTO \times O = ?$  For example, you could make  $458 \times 7 = ?$
2. In each question, you can only use each digit once. Work out the answer to your calculation, using any method you like (but don't use a calculator!).
3. Make a list of the different products that you have made on Challenge 11 Sheet (remember, a product is the result of a multiplication). How can you make sure you have found all the possible products? Fill in Challenge 11 Sheet to explain how you did this.

### You will need:

- Challenge 11 Sheet

Completed on (date):

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Adult's initials:

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## 12 My Favourite Number

### Your challenge:

- How much do you know about your favourite number?

### What to do:

1. What's your favourite number? Write it down in the centre of a piece of plain paper.
2. Note down at least 20 facts about the number around your number, creating a poster. Examples you could choose include factors, multiples, even/odd, square number, sides on a shape etc.
3. For example, if your favourite number was 32, you could write down facts like:
  - It's a multiple of 1, 2, 4, 8 and 16
  - It's an even number
  - $32 \times 2 = 64$
  - $1 + 31 = 32$
4. Try to make sure you have a good range of different types of facts.
5. Be as creative as you can with how you present your work. Why not help other people in your family to create a poster showing their favourite number too?

### You will need:

- A piece of plain paper
- Colouring pencils or crayons

Completed on (date):

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Adult's initials:

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## 13 Trolls and Giants

### Your challenge:

- Who will win in the battle between troll and giant?

### How to play:

1. Sit opposite your partner and decide who will be the troll and who will be the giant.
2. Place the grid from Challenge 13 Sheet in between you. The aim of the game is for the troll to make it to the giant's home on the other side of the grid. The giant's aim is to stop the troll from getting there by ending up on the same hexagon on the grid as the troll.
3. The troll goes first. Place your counter on one of the hexagons on the 'troll's home' side of the paper and carry out the calculation in the hexagon. If the calculation is correct (your partner needs to check and agree) you get to move to that hexagon.
4. The giant starts in the same way from the 'giant's home' side of the paper.
5. On the next turn, each player can move to one of the hexagons joint to the hexagon they are on. If they get the answer correct, they move to that hexagon; if they don't get it correct, they stay as they are!
6. Have a think about your strategy – where will you move next? Try to play the game at least two times.

### You will need:

- Challenge 13 Sheet
- A partner
- A counter each (you could make your own out of paper)
- Plain paper for any working out

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 \_\_\_\_\_

Completed on (date):

Adult's initials:

## 14 How Much Screen Time?

### 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!

### Things to remember:

1. Use Challenge 14 Sheet 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.

### You will need:

- Challenge 14 Sheet
- A pencil or pen
- A clock or watch

Completed on (date):

Adult's initials:

## 15 Fraction Hunting

### Your challenge:

- Can you find the fractions all around us?

### What to do:

1. On a plain piece of paper, write 'Fractions are all around us' in the middle.
2. Fill the rest of the paper with places you have seen fractions in real life over the holidays.
3. Perhaps you've been to the supermarket – can you see any fractions there? Have you shared some cake over the holiday? I bet you used fractions there too! Look carefully, and you will find fractions everywhere!

### You will need:

- A plain piece of paper

Completed on (date):

Adult's initials:

## 16 Fraction and Decimal Snap

### Your challenge:

- Let's play a game of snap, but with a maths twist.

### How to play:

- Shuffle the cards from Challenge 16 Sheet and deal them between the players.
- Play just like you would do in 'normal' snap – take it in turns to turn over one of your cards and place it in the middle.
- 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 the following pairs are equivalent:
  - $\frac{1}{4}$  and  $\frac{2}{4}$
  - $\frac{1}{3}$  and  $\frac{3}{9}$
  - $\frac{1}{2}$  and 0.5
- 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 \_\_\_\_\_

### You will need:

- The cards from Challenge 16 Sheet cut up
- At least one other person

Completed on (date):

Adult's initials:

## 17 Money Problems

### Your challenge:

- Maths problems are everywhere! Can you write at least six worded problems that involve money?

### What to do:

- You could base your money problems on ways you have used money during the holidays, or you could totally make them up.
- Try to write problems that involve different operations – could you create problems that involve more than one operation? Bring in the sheet of problems with your challenge sheet in September!

### You will need:

- A sheet of lined paper

Completed on (date):

Adult's initials:

## 18 What's the Perimeter?

### Your challenge:

- Can you find the perimeter of your garden (or the garden of someone you know)?

### Things to remember:

1. The perimeter is the distance around the outside of a shape or area.
2. To help you, draw a rough outline of the space you are measuring on a piece of plain paper, and mark on the side lengths that you measure. Bring this piece of paper in with you with your challenge sheets in September!
3. Think about how you are going to measure the side lengths, and what unit you will use.

No garden? No Problem! Measure the perimeter of a room where you live instead.

The perimeter of my \_\_\_\_\_ is \_\_\_\_\_

### You will need:

- A tape measure or ruler
- A large area to measure the perimeter of
- Plain paper

Completed on (date):

Adult's initials:

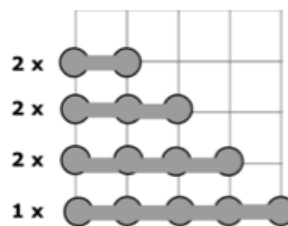
## 19 Battleships!

### Your challenge:

- Let's play a classic game of battleships – but with a coordinates twist!

### How to play:

1. First, plot the 'ships' shown below on your grid. Make sure you hide them, so they are difficult for your partner to find.
2. Then, take it in turns to guess where your partner's ships are hidden. To do this, you need to read out the co-ordinates – remember, you read out the horizontal axis value first, and then the vertical axis value.
3. Your partner will then tell you if you have 'hit' one of their ships or not. Keep track of your hits and misses on The Enemy's Map. If you get a 'hit' you get another go, if not, it's your partner's turn to guess.
4. Who can find all of their partner's battleships first?



### You will need:

- Two copies of Challenge 19 Sheet
- A partner
- Two pencils

I played with \_\_\_\_\_

The person who won was \_\_\_\_\_

Completed on (date):

Adult's initials:

## 20 Tug of War

### Your challenge:

- Why not play a maths version of Tug of War?

### How to play:

1. Firstly, decide which player is going to 'add' and which player is going to 'subtract', then shuffle the digit cards into one pile. Write down the number 2,500 at the top of your piece of paper.
2. The player who is adding starts first. They turn over three cards and make them into a three-digit number (for example, 569). The player who is adding adds these to 2,500 (e.g.  $2,500 + 569 = 3,069$ ). The result of this calculation is your new running total.
3. The player who is subtracting goes next. They turn over three digits, make it into a three-digit number and subtract it from the running total.
4. Keep playing in the same way, taking it in turns to make a number and add or subtract it. If the player who is adding gets above 5000 they win, and if the player who is subtracting gets below 1 they win!

Who will win the tug of war?

I played with \_\_\_\_\_

The person who won was \_\_\_\_\_

### You will need:

- Digit Cards Resource Sheet
- A partner
- Paper to keep a track of your score

Completed on (date):

Adult's initials:

# Challenge 1 Sheet Hunting for Arrays

Use this sheet to record 8 different arrays that you have spotted during the holiday. Write down 4 calculations that each array shows.

The first one has been done for you.

1. The array I spotted was:  
cans at the supermarket



$$\begin{array}{r} 4 \\ \hline \end{array} \times \begin{array}{r} 2 \\ \hline \end{array} = \begin{array}{r} 8 \\ \hline \end{array}$$
$$\begin{array}{r} 2 \\ \hline \end{array} \times \begin{array}{r} 4 \\ \hline \end{array} = \begin{array}{r} 8 \\ \hline \end{array}$$
$$\begin{array}{r} 8 \\ \hline \end{array} \div \begin{array}{r} 2 \\ \hline \end{array} = \begin{array}{r} 4 \\ \hline \end{array}$$
$$\begin{array}{r} 8 \\ \hline \end{array} \div \begin{array}{r} 4 \\ \hline \end{array} = \begin{array}{r} 2 \\ \hline \end{array}$$

2. The array I spotted was:

$$\begin{array}{r} \square \\ \hline \end{array} \times \begin{array}{r} \square \\ \hline \end{array} = \begin{array}{r} \square \\ \hline \end{array}$$
$$\begin{array}{r} \square \\ \hline \end{array} \times \begin{array}{r} \square \\ \hline \end{array} = \begin{array}{r} \square \\ \hline \end{array}$$
$$\begin{array}{r} \square \\ \hline \end{array} \div \begin{array}{r} \square \\ \hline \end{array} = \begin{array}{r} \square \\ \hline \end{array}$$
$$\begin{array}{r} \square \\ \hline \end{array} \div \begin{array}{r} \square \\ \hline \end{array} = \begin{array}{r} \square \\ \hline \end{array}$$

3. The array I spotted was:

$$\begin{array}{r} \square \\ \hline \end{array} \times \begin{array}{r} \square \\ \hline \end{array} = \begin{array}{r} \square \\ \hline \end{array}$$
$$\begin{array}{r} \square \\ \hline \end{array} \times \begin{array}{r} \square \\ \hline \end{array} = \begin{array}{r} \square \\ \hline \end{array}$$
$$\begin{array}{r} \square \\ \hline \end{array} \div \begin{array}{r} \square \\ \hline \end{array} = \begin{array}{r} \square \\ \hline \end{array}$$
$$\begin{array}{r} \square \\ \hline \end{array} \div \begin{array}{r} \square \\ \hline \end{array} = \begin{array}{r} \square \\ \hline \end{array}$$

4. The array I spotted was:

$$\begin{array}{r} \square \\ \hline \end{array} \times \begin{array}{r} \square \\ \hline \end{array} = \begin{array}{r} \square \\ \hline \end{array}$$
$$\begin{array}{r} \square \\ \hline \end{array} \times \begin{array}{r} \square \\ \hline \end{array} = \begin{array}{r} \square \\ \hline \end{array}$$
$$\begin{array}{r} \square \\ \hline \end{array} \div \begin{array}{r} \square \\ \hline \end{array} = \begin{array}{r} \square \\ \hline \end{array}$$
$$\begin{array}{r} \square \\ \hline \end{array} \div \begin{array}{r} \square \\ \hline \end{array} = \begin{array}{r} \square \\ \hline \end{array}$$

5. The array I spotted was:

$$\begin{array}{l} \underline{\quad} \square \underline{\quad} = \underline{\quad} \\ \underline{\quad} \square \underline{\quad} = \underline{\quad} \\ \underline{\quad} \square \underline{\quad} = \underline{\quad} \\ \underline{\quad} \square \underline{\quad} = \underline{\quad} \end{array}$$

6. The array I spotted was:

$$\begin{array}{l} \underline{\quad} \square \underline{\quad} = \underline{\quad} \\ \underline{\quad} \square \underline{\quad} = \underline{\quad} \\ \underline{\quad} \square \underline{\quad} = \underline{\quad} \\ \underline{\quad} \square \underline{\quad} = \underline{\quad} \end{array}$$

7. The array I spotted was:

$$\begin{array}{l} \underline{\quad} \square \underline{\quad} = \underline{\quad} \\ \underline{\quad} \square \underline{\quad} = \underline{\quad} \\ \underline{\quad} \square \underline{\quad} = \underline{\quad} \\ \underline{\quad} \square \underline{\quad} = \underline{\quad} \end{array}$$

8. The array I spotted was:

$$\begin{array}{l} \underline{\quad} \square \underline{\quad} = \underline{\quad} \\ \underline{\quad} \square \underline{\quad} = \underline{\quad} \\ \underline{\quad} \square \underline{\quad} = \underline{\quad} \\ \underline{\quad} \square \underline{\quad} = \underline{\quad} \end{array}$$

## Challenge 3 Sheet Multiplication Mosaic

Solve the questions in the squares below. Colour in the squares with the colours based on your answer. What picture will you make?

**Brown:** 3, 6, 7, 8, 18, 21, 24, 28, 32, 35, 49, 42, 60, 70

**Pink:** 9, 15, 27, 30, 40

**Black:** 21, 56, 84

**Blue:** Any other number

$4 \times 8 =$	$3 \times 8 =$	$4 \times 8 =$	$4 \times 7 =$	$3 \times 7 =$	$7 \times 1 =$	$4 \times 8 =$	$7 \times 10 =$	$6 \times 7 =$
$3 \times 8 =$	$10 \times 3 =$	$2 \times 4 =$	$7 \times 12 =$	$8 \times 4 =$	$8 \times 7 =$	$7 \times 4 =$	$3 \times 5 =$	$10 \times 7 =$
$7 \times 7 =$	$3 \times 3 =$	$7 \times 6 =$	$7 \times 10 =$	$1 \times 3 =$	$3 \times 2 =$	$7 \times 10 =$	$8 \times 5 =$	$1 \times 7 =$
$6 \times 10 =$	$2 \times 8 =$	$3 \times 6 =$	$4 \times 6 =$	$3 \times 7 =$	$5 \times 7 =$	$9 \times 2 =$	$8 \times 0 =$	$6 \times 8 =$
$5 \times 5 =$	$7 \times 0 =$	$10 \times 6 =$	$7 \times 3 =$	$7 \times 8 =$	$12 \times 7 =$	$6 \times 10 =$	$12 \times 7 =$	$9 \times 6 =$
$5 \times 6 =$	$6 \times 6 =$	$11 \times 3 =$	$7 \times 10 =$	$7 \times 7 =$	$7 \times 5 =$	$3 \times 1 =$	$11 \times 3 =$	$8 \times 6 =$
$3 \times 9 =$	$6 \times 12 =$	$5 \times 12 =$	$3 \times 9 =$	$5 \times 8 =$	$9 \times 3 =$	$0 \times 6 =$	$3 \times 0 =$	$7 \times 12 =$
$11 \times 6 =$	$6 \times 9 =$	$3 \times 6 =$	$7 \times 5 =$	$6 \times 4 =$	$2 \times 3 =$	$4 \times 2 =$	$10 \times 12 =$	$6 \times 11 =$
$3 \times 0 =$	$9 \times 2 =$	$7 \times 7 =$	$6 \times 10 =$	$8 \times 3 =$	$7 \times 8 =$	$4 \times 7 =$	$3 \times 1 =$	$9 \times 3 =$





**C.** Now, use the lines below to write at least five things that you can tell from your data.

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**D.** Complete this sentence:

After collecting my data, the person who created the most washing in the house was

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## Challenge 10 Sheet Mystery Times Tables

These times tables are a mystery. Each digit has been replaced by a letter and the order of the times tables has been jumbled up!

Can you work out which digit each letter stands for? There are two sets of times tables for you to complete.

Try to spot patterns in the digits so you can rule out certain numbers and rule in others.

Can you work out which times table is the 11 times table or the 1 times table? Does the number of single digit answers help you work out which times table it could be?

Solve the puzzle and record which digit each letter stands for on the challenge sheet.

### Times Tables Set 1

$$M = \square \quad N = \square \quad P = \square \quad Q = \square \quad R = \square$$

$$S = \square \quad T = \square \quad U = \square \quad Y = \square \quad Z = \square$$

$$Y \times Z = Z$$

$$Z \times Z = S$$

$$T \times Z = YP$$

$$M \times Z = YQ$$

$$N \times Z = PY$$

$$YY \times Z = ZZ$$

$$Q \times Z = PT$$

$$U \times Z = YU$$

$$YP \times Z = Z6$$

$$P \times Z = M$$

$$S \times Z = 2N$$

$$YR \times Z = ZR$$

### Times Tables Set 2

The letters and their digits are different to the first set!

$$A = \square \quad B = \square \quad C = \square \quad D = \square \quad E = \square$$

$$F = \square \quad G = \square \quad J = \square \quad K = \square$$

$$C \times A = A$$

$$D \times A = JG$$

$$F \times A = KF$$

$$A \times A = FC$$

$$E \times A = KJ$$

$$G \times A = FK$$

$$F \times A = AE$$

$$J \times A = CF$$

$$K \times A = DE$$

$$CC \times A = AA$$

$$CJ \times A = CBF$$

$$CB \times A = AB$$



# Challenge 13 Sheet Trolls vs Giants

## Troll's House

A large hexagonal grid containing 70 math problems. The problems are arranged in 7 rows of 10 hexagons each. Each hexagon contains a math problem.

Row 1:  $654 + 3922 = ?$ ,  $8654 - 832 = ?$ ,  $8543 + 1320 = ?$ ,  $678 + 1754 = ?$ ,  $8754 - 3822 = ?$ ,  $843 + 983 = ?$ ,  $8832 - 4832 = ?$

Row 2:  $5432 + 1832 = ?$ ,  $876 - 382 = ?$ ,  $8650 - 6543 = ?$ ,  $7693 - 2754 = ?$ ,  $5684 + 2831 = ?$ ,  $654 - 93 = ?$ ,  $8430 - 8322 = ?$

Row 3:  $4909 - 3487 = ?$ ,  $6592 - 4989 = ?$ ,  $5203 - 2401 = ?$ ,  $9999 - 4329 = ?$ ,  $2874 - 832 = ?$ ,  $74 + 833 + 1 = ?$ ,  $865 - 32 - 3 = ?$

Row 4:  $4329 - 2831 = ?$ ,  $6649 - 2873 = ?$ ,  $1743 - 287 = ?$ ,  $876 + 8322 = ?$ ,  $3901 - 2801 = ?$ ,  $7932 - 2432 = ?$ ,  $4912 - 3789 = ?$

Row 5:  $9032 - 5689 = ?$ ,  $843 + 7543 = ?$ ,  $6854 + 2823 = ?$ ,  $4892 + 4879 = ?$ ,  $7293 + 1382 = ?$ ,  $3432 + 383 = ?$ ,  $8764 - 1276 = ?$

Row 6:  $7603 + 989 = ?$ ,  $765 + 878 = ?$ ,  $68 + 854 = ?$ ,  $8794 - 982 = ?$ ,  $7930 - 4596 = ?$ ,  $3888 - 2325 = ?$ ,  $7932 - 4865 = ?$

Row 7:  $6584 - 3219 = ?$ ,  $3382 + 7432 = ?$ ,  $5943 + 3291 = ?$ ,  $4021 + 2304 = ?$ ,  $854 - 382 = ?$ ,  $7803 + 189 = ?$ ,  $5483 + 832 = ?$

Row 8:  $3239 + 3821 = ?$ ,  $854 + 8320 = ?$ ,  $6854 - 3821 = ?$ ,  $7923 - 4382 = ?$ ,  $9898 - 8432 = ?$ ,  $543 + 7684 = ?$ ,  $3765 + 4573 = ?$

## Giant's House



## Challenge 15 Sheet Fraction and Decimal Snap

$\frac{1}{2}$	0.25	$\frac{2}{4}$	$\frac{1}{2}$	$\frac{16}{20}$
0.75	$\frac{3}{4}$	$\frac{5}{10}$	$\frac{1}{3}$	0.75
$\frac{1}{5}$	0.5	$\frac{2}{6}$	$\frac{9}{12}$	$\frac{5}{6}$
$\frac{5}{15}$	$\frac{2}{10}$	$\frac{3}{5}$	$\frac{25}{100}$	$\frac{8}{10}$



$$\frac{4}{8}$$

$$\frac{6}{10}$$

$$\frac{4}{20}$$

$$\frac{1}{7}$$

$$\frac{80}{100}$$

$$\frac{6}{8}$$

$$\frac{9}{15}$$

$$\frac{30}{50}$$

$$\frac{3}{21}$$

0.25

$$\frac{3}{9}$$

$$\frac{5}{6}$$

$$\frac{50}{100}$$

0.5

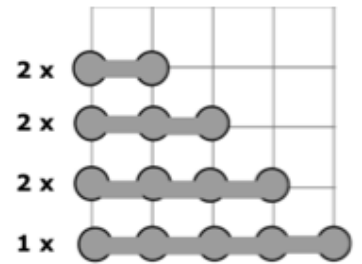
$$\frac{15}{18}$$

$$\frac{3}{15}$$

$$\frac{10}{12}$$

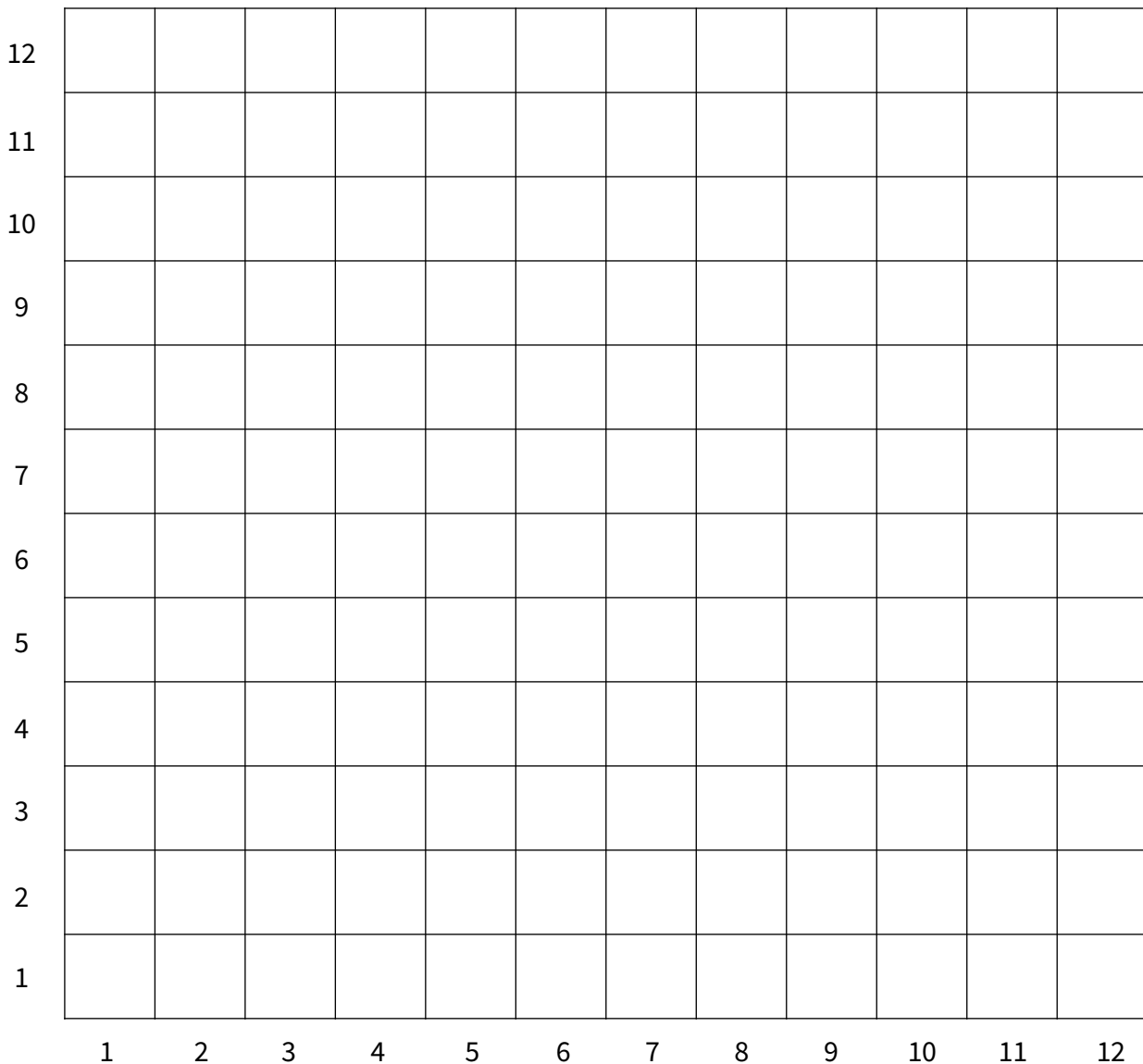
# Challenge 19 Sheet Battleships

Let's play a game of co-ordinate battleships.  
See the challenge list for the full instructions.



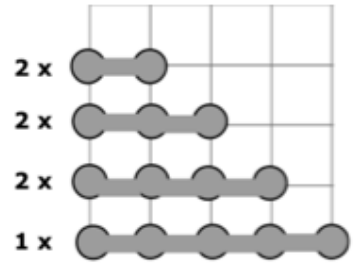
Here are the boats you need to put on your grid. Remember, your boats are made up of points not squares.

## My Map



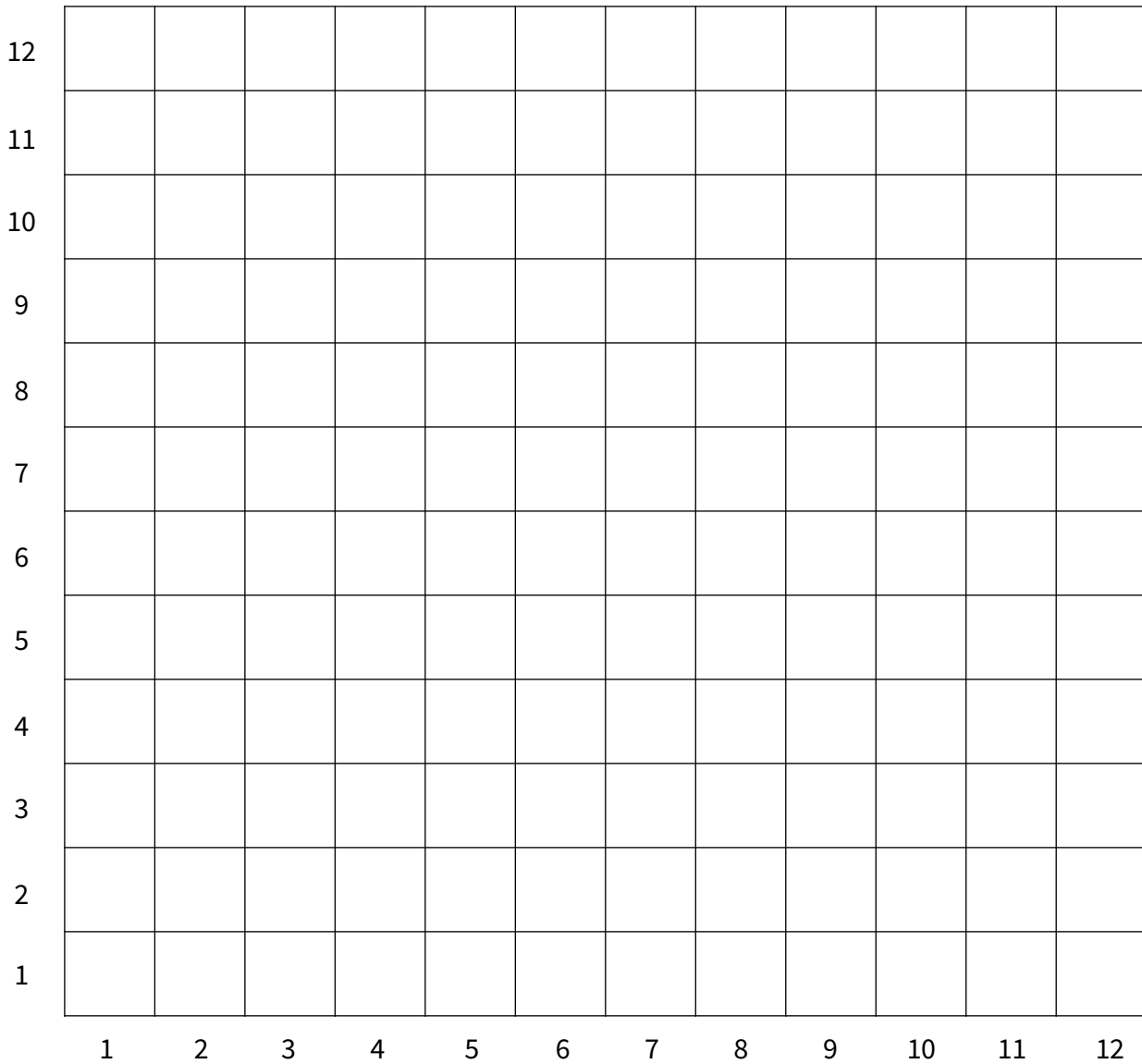
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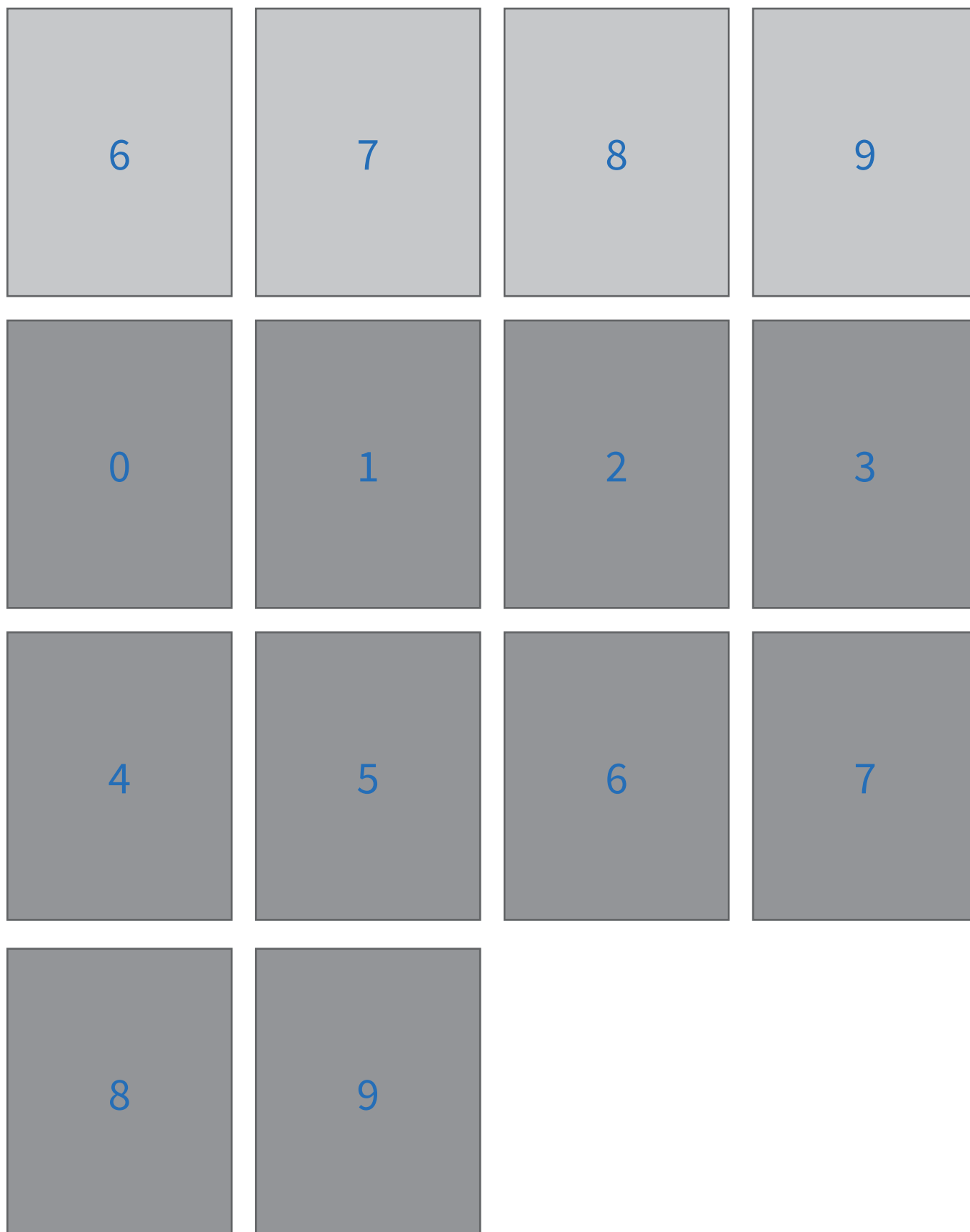
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## My Enemy's Map



# Resource Sheet 1

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



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**Lisa Graham**

Deputy Headteacher  
St Hugh's Church of England Primary School

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Year 6



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