

## Maths Isolation pack - Week 2

### Message

Hi Year 4!

Welcome to your isolation pack week 2!

We're doing things a little differently this week and giving you tasks for each day of the school week so we can keep those brains busy!

Each task can be done without a printer but there are extra activities for you to print out if you want to boost your learning even further.

You can try and write the questions and tasks out from the computer onto paper - this will help other family members have access to the technology you are currently using to view this.

I also found a lovely quote about being a mathematician. It says:

**“Being good at maths isn't how many answers you have in your head; it's about how you behave when you don't have the answer.”**

Good luck, stay strong and keep well!  
Mr Shiel, Ms Davies, Ms Schmidt, Mr Goddard

### Teaching

This week for our remote learning in Maths, we are going to look at subtraction. In Year 4 we have practised using mental and written methods to solve subtraction problems. We want you to use the written column method for subtraction.

If the numbers are too high or too difficult to subtract in your head, write them down in columns. Separate the numbers into ones, tens, hundreds and thousands. List the numbers in a column and always start with the ones first.

$$\begin{array}{r} \text{T} \quad \text{U} \\ 3 \quad 5 - \\ 2 \quad 4 \\ \hline 1 \quad 1 \end{array}$$

If the number you are taking away is larger than the one above it, you will need to borrow from the next column.

$$\begin{array}{r} 6 \quad 7 \quad 12 \\ 5 \quad 6 - \\ \hline 1 \quad 6 \end{array}$$

Here, 2 minus 6 cannot be done, so we borrow a ten from the tens column to make 12. 12 minus 6 can be done! We make the tens column one less and we can go to work! Hurray 😊

### Website Links

Here are some useful teaching videos:

<https://www.mathsisfun.com/numbers/subtraction-regrouping.html>

<https://www.bbc.co.uk/bitesize/topics/zy2mn39/articles/zc78srd>

Here are some websites where you can practise your skills and print out extra activities.

<https://www.mathsisfun.com/worksheets/subtraction.php>

<https://www.mymaths.co.uk/>

<http://www.snappymaths.com/addition/addw100/resources/addw100ear1.pdf>

<http://www.snappymaths.com/addsub/writaddsub/resources/csub4digmrs1.pdf>

You can print additional worksheets for free from this website. Make sure you look for Year 4 resources on subtraction:

<https://www.twinkl.co.uk/>

## Lesson One – Quick Questions

Today we are splitting your maths session into 3 parts. Our first is quick questions, which might be times table practice, number bonds to certain amounts or other quick-fire calculation questions.

If you have squared paper or an exercise book with squared paper, then it will help to use that.

### Quick Questions Lesson 1 – Mixed Tables

$4 \times 4 =$

$3 \times 6 =$

$7 \times 8 =$

$9 \times 7 =$

$4 \times 5 =$

$6 \times 6 =$

$8 \times 9 =$

$5 \times 4 =$

$7 \times 3 =$

$12 \times 11 =$

$4 \times 9 =$

$6 \times 7 =$

$3 \times 5 =$

$4 \times 3 =$

You can try an online test as well:

<http://www.timestables.me.uk/>

## Column Subtraction

Here are 15 questions to try the method with. Watch out, they get harder!

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

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

$$\begin{array}{r} 10. \quad 5,677 \\ - \quad 4,506 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 4,361 \\ - \quad 1,213 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 4,665 \\ - \quad 1,418 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 5,449 \\ - \quad 3,273 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 2,013 \\ - \quad \quad 613 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad 5,847 \\ - \quad 2,869 \\ \hline \end{array}$$

## Apply it

In this section we will give you different ways for you to apply your learning. It might be investigations, games or tricky thinking puzzles. Have a go!

Each of these shapes has a value, but the red shapes' values change in each line of shapes. Can you work it out each time? Draw the shapes on paper or in an exercise book.

 = 7    
  = 17    
  = ?



 = 125




 = 151






 = 136



 = 36







 = 200

### Test the Grown-ups!

Can you make 3 different lines of shapes using the green, red and orange shapes?

Try to work out what they would equal and then test someone in your family to find out the answers!

## Lesson Two – Quick Questions

Quick Questions Lesson 2 – Number bonds to 100

$$30 + \dots = 100$$

$$20 + \dots = 100$$

$$60 + \dots = 100$$

$$32 + \dots = 100$$

$$26 + \dots = 100$$

$$65 + \dots = 100$$

$$39 + \dots + 11 = 100$$

$$27 + \dots + 45 = 100$$

$$62 + \dots + 20 = 100$$

$$20 + 45 + \dots = 100$$

$$44 + 35 + \dots = 100$$

$$50 + 14 + \dots = 100$$

## Column Subtraction

These calculations are missing numbers. Write out the calculations and figure out the missing digits.

1. 
$$\begin{array}{r} 5 \square 6 \\ - \quad 5 \square \\ \hline 4 \ 5 \ 2 \end{array}$$

2. 
$$\begin{array}{r} 3 \ 8 \ \square \\ - \quad \square \ 4 \\ \hline 2 \ 9 \ 2 \end{array}$$

3. 
$$\begin{array}{r} 7 \ \square \ 5 \\ - \quad 3 \ \square \\ \hline 6 \ 7 \ 0 \end{array}$$

6. 
$$\begin{array}{r} 8 \ 9 \ \square \\ - \quad \square \ 3 \\ \hline 8 \ 5 \ 7 \end{array}$$

7. 
$$\begin{array}{r} 2 \ \square \ 2 \\ - \quad 6 \ \square \\ \hline 2 \ 2 \ 3 \end{array}$$

8. 
$$\begin{array}{r} 8 \ \square \ 9 \\ - \quad 6 \ \square \\ \hline 7 \ 9 \ 9 \end{array}$$

11. 
$$\begin{array}{r} 5 \ 7 \ \square \\ - \quad \square \ 1 \\ \hline 5 \ 5 \ 4 \end{array}$$

12. 
$$\begin{array}{r} 2 \ \square \ 4 \\ - \quad 6 \ \square \\ \hline 1 \ 6 \ 6 \end{array}$$

13. 
$$\begin{array}{r} 4 \ \square \ 0 \\ - \quad 8 \ \square \\ \hline 3 \ 4 \ 4 \end{array}$$

16. 
$$\begin{array}{r} 9 \ 2 \ \square \\ - \quad \square \ 6 \\ \hline 8 \ 4 \ 3 \end{array}$$

17. 
$$\begin{array}{r} 9 \ \square \ 3 \\ - \quad 2 \ \square \\ \hline 9 \ 2 \ 7 \end{array}$$

18. 
$$\begin{array}{r} 6 \ 9 \ \square \\ - \quad \square \ 3 \\ \hline 6 \ 1 \ 3 \end{array}$$

## Apply it

### Err...How does that happen?

Have a go at this number magic trick and see if you can work out how it happens.

Start with a 3-digit number where the first digit is bigger than the third, e.g. 432

Then reverse the number: 234

Take the 2<sup>nd</sup> number away from the first: 432 – 234. This equals 198.

Now reverse that number. 198 becomes 981.

Add the two together. 198 + 981. This equals **1098**.

Try it with another totally random number: 521. So, reverse it. Take it away, 521 - 125.

Get an answer. Reverse it and add it together.

You will get the same exact total. **1098!**

Try it with these 3-digit numbers.

$$752 - 257$$

$$631 - 136$$

$$842 - 248$$

$$731 - 137$$

$$943 - 349$$

Do you get the same number every time?

Can you think of other numbers to test?

## Lesson Three – Mixed Operations

Today's quick-fire maths is mixed operations. Write down the number sentences and try to solve them using mental methods.

$$12 + 11 + 13 =$$

$$23 + 3 + 9 =$$

$$16 + 5 - 12 =$$

$$8 + 13 - 2 =$$

$$9 \times 2 + 4 =$$

$$5 \times 5 - 3 =$$

$$9 + 15 - 6 =$$

$$3 \times 12 + 22 =$$

$$17 - 9 + 46 =$$

$$15 \times 4 - 13 =$$

$$22 \times 2 + 32 - 4 =$$

$$11 \times 11 - 39 =$$

$$45 \times 2 + 112 =$$

$$72 + 99 - 16 =$$

## Mixed Addition and Subtraction

Today we are combining this week's focus with last week's. Here a mix of addition and subtraction problems. Be careful that you are using the right strategy!

$$\begin{array}{r} 4,887 \\ + 4,982 \\ \hline \end{array}$$

$$\begin{array}{r} 768 \\ + 4,237 \\ \hline \end{array}$$

$$\begin{array}{r} 5,931 \\ + 3,044 \\ \hline \end{array}$$

$$\begin{array}{r} 3,429 \\ + 1,775 \\ \hline \end{array}$$

$$\begin{array}{r} 2,725 \\ + 3,569 \\ \hline \end{array}$$

$$\begin{array}{r} 551 \\ + 5,888 \\ \hline \end{array}$$

$$\begin{array}{r} 1,675 \\ - 507 \\ \hline \end{array}$$

$$\begin{array}{r} 7,031 \\ - 2,901 \\ \hline \end{array}$$

$$\begin{array}{r} 9,126 \\ - 8,735 \\ \hline \end{array}$$

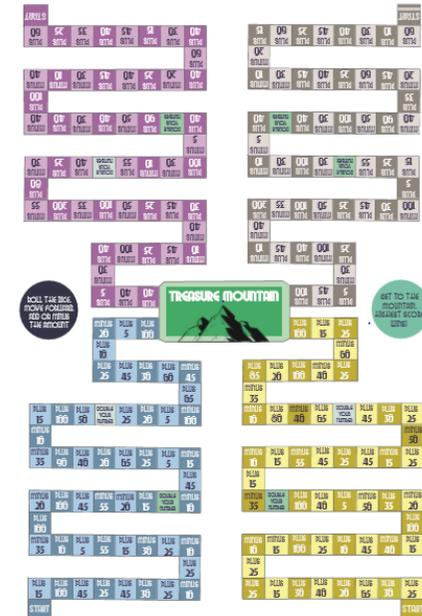
$$\begin{array}{r} 6,456 \\ - 1,822 \\ \hline \end{array}$$

$$\begin{array}{r} 7,698 \\ - 725 \\ \hline \end{array}$$

$$\begin{array}{r} 6,599 \\ - 3,273 \\ \hline \end{array}$$

## Apply it: Treasure Mountain

There are 2 choices for this element. A Print n' Play game called Treasure Mountain or a chance to make your own version, or both! Here's what it looks like. You can see it close up and print the board from our website.



The game works like this:

1-4 players. Each player starts in a corner. Player 1 rolls a dice. **Everyone** moves that amount. Add or subtract the value you land on – it might be plus or minus. Player 2 rolls a dice. **Everyone** moves that amount. Add or subtract the value you land on. Continue until everyone reaches the mountain. The player with the highest number wins. **If you are unable to print, then use these rules and create your own board to play at home.**

## Lesson Four – Place Value

Today's quick-fire maths is based on place value knowledge.

$32 + 10 =$

$45 - 10 =$

$398 - 10 =$

$456 + 10 =$

$786 - 100 =$

$832 - 110 =$

$899 + 10 =$

$978 - 110 =$

$2,345 - 100 =$

$5,678 - 10 =$

$3,899 + 100 =$

$12,567 + 1000 =$

$13,876 + 100 =$

$14,398 - 1010 =$

$25,990 + 1110 =$

## Number problems and Patterns

Here a mix of addition and subtraction problems. Be careful that you are using the right strategy depending on whether it's addition or subtraction.

Sequences:

$200 \dots 188 \dots 174 \dots ? \dots ? \dots ? \dots ?$

$63 \dots 100 \dots 137 \dots ? \dots ? \dots ? \dots ? \dots ? \dots ?$

$? \dots ? \dots 985 \dots 813 \dots ? \dots ? \dots ?$

$? \dots ? \dots 496 \dots 693 \dots ? \dots ? \dots ?$

$4000 = 2786 + \dots$

$7000 = 9786 - \dots$

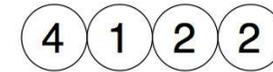
$12,000 = 6759 + \dots$

$6743 = 13,000 - \dots$

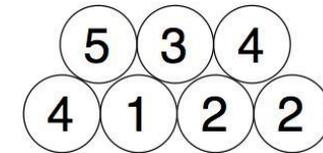
$8900 = 17,500 - \dots$

## Apply it: Build it Up

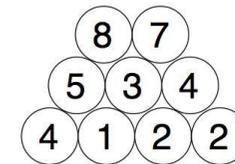
We start with any four numbers (not zero!):



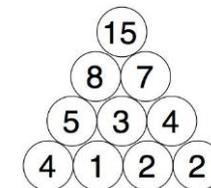
We then add them in pairs and place the total above them:



And we then add in pairs the new numbers we just got:



We do the same with those two numbers to get our final number:



You need to find four starting numbers to place at the bottom so that when you get to the top it's **15 each time.**

Try to find as many starting four numbers as you can!

## Lesson Five

Which is bigger?

Copy out these numbers and put a  $<$  = or  $>$  to show which is bigger.

$12 \times 3 \quad 40 - 15$

$4 \times 11 \quad 60 - 16$

$8 \times 6 \quad 37 + 11$

$13 \times 2 \quad 41 - 25$

$20 \times 3 \quad 38 + 23$

$9 \times 8 \quad 23 + 15$

$12 \times 11 \quad 150 - 29$

$4 \times 7 \quad 19 + 7$

$12 \times 8 \quad 43 + 51$

## Top Trumps Challenge



In this activity, you must create 6 character cards for a game of TOP TRUMPS. Each card has six categories which must be given a score. Templates are on the website.

1: Magical Powers

2: Dance Powers

3: Wisdom

4: Ferocity

5: Speed

6: Stinkiness

**IMPORTANT -You only have 6000 points to share out amongst the six cards.**

For example; you could decide to evenly share out these points by putting aside 1000 points for each card and then splitting that 1000 between the six categories of that one card.

Here are some rules.

- No category is allowed to be less than 39.
- Every category you attribute points to must be an odd number.
- No one card is allowed to have more than 3000 points altogether.

Your characters can be members of your family, magical creatures, talking fruit or even famous historical figures. You can draw your own cards, print out templates or print out my examples. You can make a wonderful mixture of characters so we can play the game with members of your family or friends.

**Templates and Example characters are on the website.**

## Apply it: Playing the Game

You will need a six-sided dice to play, either real or virtual, and someone to play against. To play a game with the cards, each player starts with **1000 points**.

Here's what to do:

Number your cards 1-6.

Roll the dice to get a number. That will tell you what card to play with.

Now roll the dice again. That will tell you what category to use. Compare scores with the person you are playing against.

The highest score wins. Now comes the MATHS part. The winner gets to **add** the **difference** between the two scores to their total.

The loser has to **take away** the **difference** from their score.

The first player to get to 2000 points, wins the game.

Here is an example.

Player 1 and Player 2 play against each other. After rolling a 3 they choose their 3<sup>rd</sup> card. They roll again and get a 2, so they have to compare scores for the 2<sup>nd</sup> category: Dance Moves.

Player 1 has a score of 99.

Player 2 has a score of 49.

That is a difference of 50.

Player 1 adds 50 points to the 1000 total.

Player 2 subtracts 50 from their score.

They roll again to choose another card....