THIRD SPACE LEARNING

Math Games And Activities Pack

16 Fun Math Activities and Games for the Classroom

3rd Grade

Contents

Note to Teachers

This pack is here to help you with some ideas of how to bring math into the classroom in a fun way. 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.

The activities are separated into individual activities and partner activities.

Individual activities

1 Multiplication Mosaic

Your challenge:

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

You will need

Challenge 1 Sheet

Colored pencils, crayons, or markers

How to play:

1. Work out the answer to the calculation in each square using your knowledge of the 1-12 multiplication facts.

2. Color in each square based on the key at the top of the sheet.

What picture will you reveal?

2 Division Mosaic

Your challenge:

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

You will need

Challenge 2 Sheet

Colored pencils, crayons, or markers

How to play:

1. Work out the answer to the calculation in each square using your knowledge of the 1-12 multiplication facts and the related division facts.
2. Color in each square based on the key at the top of the sheet.

3 How Many Answers?

Your challenge:
How many equations can you make out of 6 digits?

How to play:

1. You have the digits 5, 6, 7, 8, 2, 3. You need to arrange them into either an addition or a subtraction equation. For example, you could make 823 - 567 or 823 + 765. In each question, you can only use each digit once.
2. Work out the answer to your equation, using any method you like (don't use a calculator).
3. Make a list of the different answers that you have made on Challenge 3 Sheet. How can you make sure you have found all of the possible (positive number) answers?

Compare your estimates to the real answers. How accurate were you?

4 My Favorite Number

Your challenge:
How much do you know about your favourite number?

What to do:

You will need

A piece of plain paper

Colored pencils or crayons

1. What's your favorite number? Write it down in the center of a piece of plain paper (if you don't have a favorite number, pick a number at random).
2. Note down at least 20 facts around your number, creating a poster. Examples you could choose include even/odd, sides on a shape etc.
3. For example, if your favorite number was 20 you could write down facts like:
   - It's in the 2, 5, 1 and 10 times table
   - It's an even number
   - 20 x 2 = 40
   - 1 + 19 = 20 and so on.
4. Try to make sure you have a good range of different types of facts. Be as creative as you can with how you present your work.

5 How Many Ways Can You Show?

Your challenge:
Find as many different ways as you can to show fractions.

You will need

A plain piece of paper

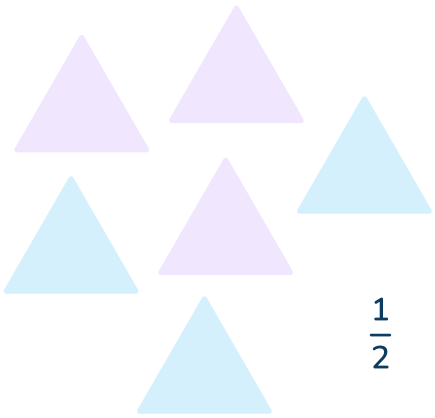
Some pencils

How to play:

1. Pick one of the fractions from the list below, and put it in the center of your paper.

$\frac{1}{4}$ $\frac{3}{4}$ $\frac{1}{3}$ $\frac{3}{8}$ $\frac{1}{8}$ $\frac{3}{10}$

2. Then, draw, write or create as many different ways of representing that number that you can.
3. So, for example, all of the ways below show $\frac{1}{2}$



$\frac{1}{2}$

10 out of 20

Can you create at least 10 ways to show the fraction that you have chosen?

6 Money Problems

Your challenge:
Which combination of coins and bills can you use to make a total?

You will need

A receipt

A piece of plain paper

Colored pencils or crayons

What to do:

1. Find an old receipt for some shopping (you may need to ask an adult for this).

2. Imagine you are paying for the total on your receipt with bills and coins. How many different combinations of bills and coins could you use to pay the total exactly (not over or under).

3. On a piece of paper, stick the receipt in the middle. Around the receipt write the different combinations you could use.

4. Be creative - could you draw the coins and bills to make sure they make the correct total?

7 Fraction Hunt

Your challenge:
How many fractions and decimals can you find in the classroom?

You will need

Plain paper

What to do:

1. Look around your classroom and list the items you find showing fractions. Are there more fractions?
2. Can you think of any items in your house that show fractions?

8 Areas

Your challenge:
Can you estimate and measure areas accurately?

You will need

A tape measure or ruler

A piece of plain paper

What to do:

1. Create a list of items you are going to find the areas of (at least 15). These could be large or small areas.
2. Next to each item, write an estimate of the area.
3. Measure items and calculate the areas.
4. Compare your estimates to the real area. How accurate were you?

Pair activities

9 Place Value Duel

Your challenge:
Can you make a larger five-digit number than your partner?

You will need

Digit Cards Resource Sheet

Two sheets of plain paper

A partner

How to play:

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

   ____ ____ ____ ____ ____
3. Take turns turning 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 4 in the tens column, you would say 'this 4 is worth 4 tens or forty'.
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 six rounds.

Who will be the champion?

I played with _____

The person who won was _____

10 Sevens Tennis

Your challenge:
Who can win a match of sevens tennis?

You will need

A partner

How to play:

1. Stand opposite your partner. The first player picks a two-digit number to start with and says that out loud. The other player must add 7 to the number. This becomes your running total.
2. Now it's back to the first player who adds 7 to the running total, and so on.

You win when:

- You are the first player to say a number over 210
- Your partner makes a mistake
- Your partner says 'umm'
- Your partner takes more than 3 seconds to answer.

Play at least 8 matches with your partner. Who will win the most games?

I played with _____

The person who won was _____

11 Four in a Row

Your challenge:
Let's play a classic game of 'four in a row' but with a math twist!

You will need

A partner
A copy of Challenge 11 Sheet
A colored pencil each
Digit Cards Resource Sheet

How to play:

1. Start by sitting next to your partner and putting one of the grids from Challenge 11 Sheet in between you. Then, put one set of the digit cards spread out on the table face down.
2. Take turns turning over a digit card, and multiply the answer by 4. If your partner agrees that you got the answer correct, you get to color in one of the squares that contains that number on the grid. Turn the digit card back over.
3. Then, your partner has their turn.
4. The person to win is the first person to color in four squares in a row (in any direction - diagonals count!) in their color. You may want to start to think about what number you need to find to color in a certain square and then to remember which card has that number on!
5. Play the game three times. Who's going to win? What's your strategy?

I played with _____

The person who won was _____

12 Tug of War

Your challenge:
Why not play a math version of Tug of War?

You will need

Digit Cards Resource Sheet

A partner

Paper to keep a track of your score

How to play:

1. First, 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 500 at the top of your piece of paper.
2. The player who is adding starts first. They turn over two cards and make them into a two-digit number (for example, 73). The player who is adding adds these to 500 (e.g. 500 + 73 = 573). The rest of this calculation is your new running total.
3. The player who is subtracting goes next. They turn over two digits, make it into a two-digit number and subtract it from the running total.
4. Keep playing in the same way, taking turns to make a number and add or subtract it. If the player who is adding gets above 1,000 they win, and if the player who is subtracting gets below 5 they win!

Who will win the tug of war?

I played with _____

The person who won was _____

13 At The Double!

Your challenge:
How quickly can you double numbers?
Play this addictive game to find out.

You will need

The cards from
Challenge 13 Sheet
A partner to play with

What to do:

1. Cut out the cards from Challenge 13 Sheet. Shuffle them and put them inbetween you and your partner.
2. Turn over one of the cards. Your challenge is to be the first player to call out double the number. The first player to do this wins the card.

Once all the cards have been used, the winner is the person with the most cards.

Play the game twice. Did you get a different winner each time?

The first time I played the game _____ won.

The second time I played the game _____ won.

14 One-handed Math, Paper, Scissors!

Your challenge:
Have you ever played 'Rock, Paper, Scissors'? Well this is a math version of the same game!

You will need

A partner

How to play:

1. Stand and face your partner. Make one fist and say together with your partner 'math, 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 5 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. 3 x 1) 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 20 points wins!

I played with _____

The person who won was _____

15 Multiplication Facts Duel

Your challenge:

Are you ready to have a multiplication fact duel?

How to play:

You will need

Two sets of the Digit Cards on Resource Sheet 1

A partner

1. This game is simple, but addictive! Shuffle two sets of digit cards from resource sheet 1, and put them in a pile between the two players.
2. Turn over the card in the middle, and for the first set of rounds, race to multiply the number by 6. So if you turned over an 8 you'd need to shout out 48 as 8 x 6 = 48.
3. The person who shouts out the correct answer first gets to keep the cards. Keep playing until there are no cards left in the center. The player with the most cards wins!
4. Once you have played with the 6 multiplication facts, play with the 7 multiplication facts, then the following multiplication facts in order: 9, 12, 3, 8.

I played 6 multiplication facts duel against _____

and the person who won was _____

I played 7 multiplication facts duel against _____

and the person who won was _____

I played 9 multiplication facts duel against _____

and the person who won was _____

I played 12 multiplication facts duel against _____

and the person who won was _____

I played 3 multiplication facts duel against _____

and the person who won was _____

I played 8 multiplication facts duel against _____

and the person who won was _____

16 Unicorns Versus Giants

Your challenge:
Who will win in the battle between unicorn and giant?

How to play:

You will need

Challenge 16 Sheet
A partner
A counter each (you could make your own out of paper)
Plain paper for any working out

1. Sit opposite your partner and decide who will be the unicorn and who will be the giant.
2. Place the grid from Challenge 16 Sheet in between you. The aim of the game is for the unicorn to make it to the giant's home on the other side of the grid. The giant's aim is to stop the unicorn from getting there by ending up on the same hexagon on the grid as the unicorn.
3. The unicorn goes first. Place your counter on one of the hexagons on the 'unicorn's home' side of the paper and solve the equation in the hexagon. If the equation 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 next 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. Think about your strategy – where will you move next? Try to play the game at least two times.

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 _____

Challenge 1 Sheet Multiplication Mosaic

Solve the questions in the squares below. Color in the squares with the colors based on your answer.

What picture will you make?

Pink: 21, 35, 45, 81

Yellow: 0, 30, 60, 70, 90

Brown: 6, 7, 9, 12, 27, 36, 56, 66, 72, 77, 99

Black: 14, 24, 42, 49, 54

Orange: 8, 10, 18, 20, 28, 48, 84, 100, 108

1 x 7 =	7 x 4 =	4 x 2 =	5 x 4 =	1 x 10 =	7 x 12 =	6 x 6 =	2 x 10 =
7 x 3 =	7 x 8 =	2 x 9 =	10 x 10 =	12 x 4 =	1 x 12 =	9 x 9 =	3 x 6 =
11 x 6 =	3 x 3 =	3 x 4 =	9 x 0 =	9 x 8 =	10 x 9 =	12 x 3 =	9 x 12 =
10 x 3 =	9 x 3 =	7 x 2 =	8 x 7 =	2 x 12 =	11 x 7 =	10 x 6 =	1 x 8 =
7 x 11 =	6 x 12 =	7 x 1	9 x 11 =	12 x 1 =	11 x 6 =	3 x 3 =	4 x 5 =
3 x 9 =	10 x 7 =	12 x 3 =	5 x 7 =	1 x 7 =	5 x 6 =	2 x 6 =	4 x 7 =
6 x 8 =	6 x 2 =	12 x 6 =	9 x 1 =	3 x 2 =	11 x 9 =	10 x 2 =	5 x 2 =
2 x 5 =	9 x 2 =	1 x 6 =	9 x 5 =	4 x 9 =	12 x 9 =	8 x 1 =	8 x 6 =
12 x 7 =	2 x 4 =	7 x 6 =	9 x 6 =	7 x 7 =	4 x 12 =	10 x 1 =	6 x 3 =
6 x 5 =	6 x 6 =	2 x 3 =	7 x 10	3 x 10 =	4 x 0 =	6 x 12 =	10 x 10 =

Challenge 2 Sheet Division Mosaic

Solve the questions in the squares below. Color in the squares with the colors based on your answer.

What picture will you make?

Orange: 1, 3

Purple: 4, 7

Blue: 8, 10, 11, 12

Green: 5, 6, 9

Yellow: 2

100 ÷ 10 =	22 ÷ 2 =	12 ÷ 1 =	48 ÷ 6 =	60 ÷ 5 =	110 ÷ 10 =	32 ÷ 4 =	80 ÷ 8 =
84 ÷ 7 =	8 ÷ 2 =	24 ÷ 3 =	44 ÷ 11 =	70 ÷ 7 =	48 ÷12 =	120 ÷ 10 =	16 ÷ 2 =
10 ÷ 1 =	21 ÷ 3 =	12 ÷ 3 =	70 ÷ 10 =	35 ÷ 5 =	40 ÷ 10 =	20 ÷ 2 =	77 ÷ 7 =
96 ÷ 12 =	56 ÷ 8 =	28 ÷ 7 =	44 ÷11 =	42 ÷ 6 =	16 ÷ 4 =	55 ÷ 5 =	80 ÷ 10 =
88 ÷ 8 =	48 ÷ 4 =	84 ÷ 12 =	4 ÷ 1 =	28 ÷ 4 =	90 ÷ 9 =	10 ÷ 10 =	6 ÷ 2 =
50 ÷ 5 =	40 ÷ 5 =	30 ÷ 3 =	5 ÷ 1 =	132 ÷ 12 =	36 ÷ 12 =	4 ÷ 2 =	24 ÷ 12 =
108 ÷ 9 =	44 ÷ 4 =	48 ÷ 6 =	63 ÷ 7 =	36 ÷ 6 =	27 ÷ 9 =	7 ÷ 7 =	21 ÷ 7 =
25 ÷ 5 =	36 ÷ 3 =	55 ÷ 11 =	72 ÷ 12 =	108 ÷ 12 =	88 ÷ 11 =	12 ÷ 12 =	9 ÷ 3 =
6 ÷ 1 =	8 ÷ 1 =	40 ÷ 4 =	27 ÷ 3 =	120 ÷ 12 =	66 ÷ 6 =	24 ÷ 2 =	54 ÷ 6 =
18 ÷ 2 =	54 ÷ 9 =	35 ÷ 7 =	45 ÷ 9 =	42 ÷ 7 =	81 ÷ 9 =	12 ÷ 2 =	15 ÷ 3 =

Challenge 2 Sheet Division Mosaic

You have the digits 5, 6, 7, 8, 2, 3
You need to arrange them into either an addition or subtraction equation.
For example, you could make 823 - 567 or 823 + 765. In each equation, you can only use each digit once.
Work out the answer to your equation, using any method you like (don't use a calculator). Make a list of the different answers that you have found. How can you make sure you have found all possible answers?
Use this space below to help you.

Challenge 11 Sheet Four in a Row

Game 1

36	4	4	24	32	0
28	36	28	16	28	36
16	20	16	32	0	4
32	24	36	20	28	36
4	0	20	28	16	24
36	28	32	28	32	4
24	16	4	20	20	24

Game 2

36	4	4	24	32	0
28	36	28	16	28	36
16	20	16	32	0	4
32	24	36	20	28	36
4	0	20	28	16	24
36	28	32	28	32	4
24	16	4	20	20	24

Challenge 11 Sheet Four in a Row

Game 3

36	4	4	24	32	0
28	36	28	16	28	36
16	20	16	32	0	4
32	24	36	20	28	36
4	0	20	28	16	24
36	28	32	28	32	4
24	16	4	20	20	24

Game 4

36	4	4	24	32	0
28	36	28	16	28	36
16	20	16	32	0	4
32	24	36	20	28	36
4	0	20	28	16	24
36	28	32	28	32	4
24	16	4	20	20	24

Challenge 13 Sheet At the Double!

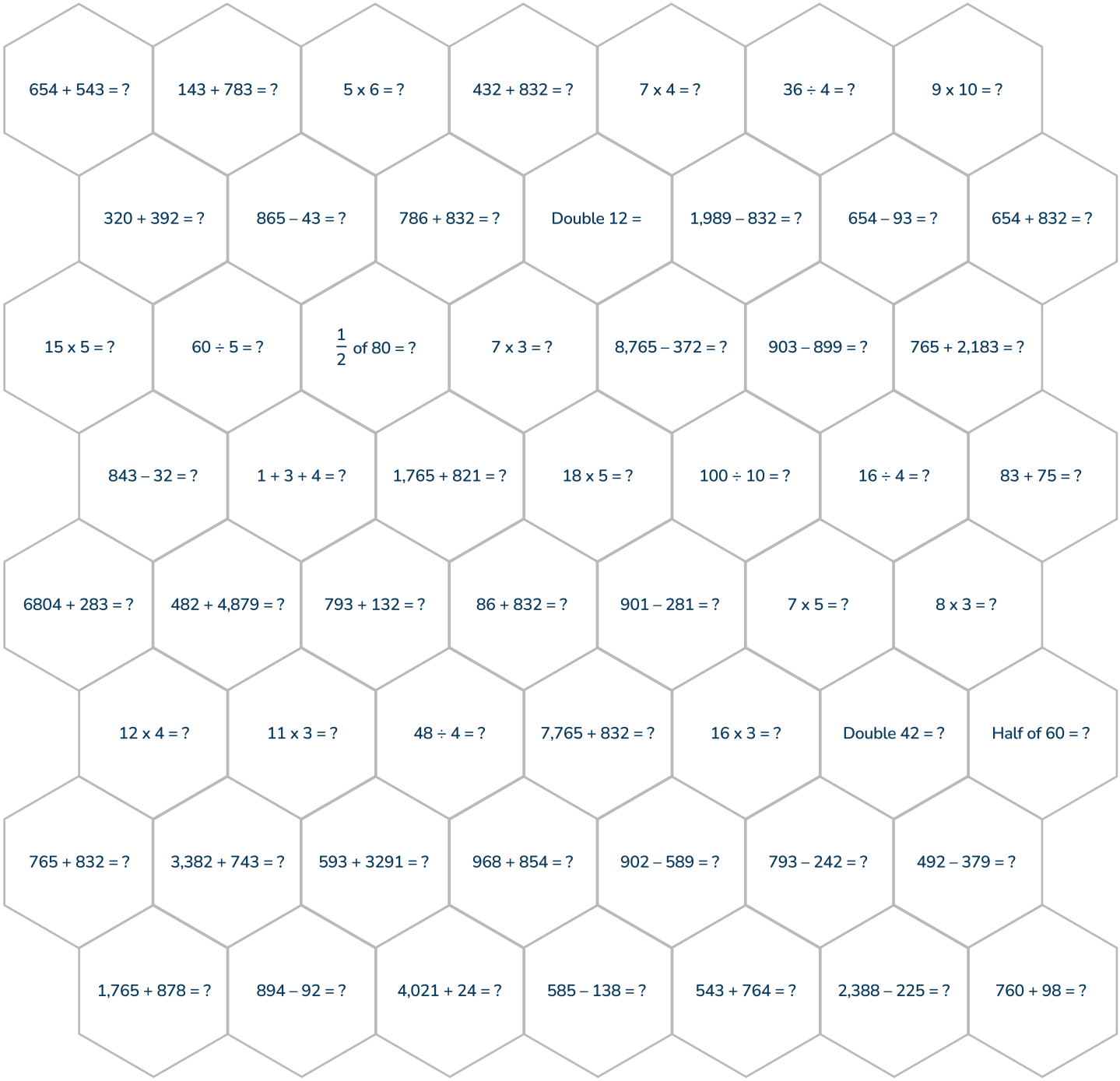
12	18	32	12
8	9	7	21
25	42	6	10
7	5	4	33

Challenge 13 Sheet At the Double!

35	44	42	11
4	6	18	21
24	26	35	50

Challenge 16 Sheet Unicorns vs Giants

Unicorn's House



Giant's House

Resource Sheet 1

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

Resource Sheet 1

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

Do you have a group of students who need a boost in math?

Each student could receive a personalized lesson every week from our specialist one on one math tutors.

- Differentiated instruction for each student
- Aligned to your state's standard
- Scaffolded learning to close gaps

Speak to us

thirdspacelearning.com/us/

+1 929-298-4593

hello@thirdspacelearning.com

THIRD SPACE LEARNING