Summer Math Activities

20 Fun math activities for the summer break

Grade 4 to 5

Note to children

Hooray! It's the summer break!

You've worked so hard this year, and learned so many new things in Grade 4 you deserve a big pat on the back. You also deserve to be able to start Grade 5 in September still knowing what you know now – and not forgetting everything over the summer!

So in between your summer adventures and relaxing, are you up for an extra challenge?

Your task is to complete 10 of the activities in this special Summer Math Activities. As well as being lots of fun, the activities will help make sure all of the amazing math that you have learned in Grade 4 sticks in your brain, ready for your new learning adventures in Grade 5.

Simply tick off the activities you have attempted and bring this pack back with you when school starts again!

Have fun!

THIRD SPACE
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Note to parents and carers

The summer break are finally here! Your child has worked hard all year learning all the math we expect Grade 4 students to know, and now they deserve some rest and relaxation. BUT... this pack is here to make sure they also don't forget all that they've learned and have some fun math activities to keep them going over the summer!

There is lots of evidence that doing just a little bit of math practice over the summer break will make it much, much easier for them to start the next school year.

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

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1 **Who Creates the Most Laundry?**

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

<div style="float:right; border:1px solid #ccc; padding:1em;">

You will need

- Resource Sheet 1

</div>

Things to remember:

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

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

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

....

4 Over the next week, use Resource Sheet 1 to record your results. In the table, record how many items of laundry each person in your house makes in the table.

5 Next create a pictogram of your results.

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

Completion date: ....

Adult initials: ....

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LEARNING

2 Playing Games With Math

Your challenge:

- Can you find the math in your favorite board or card game such as Go Fish, UNO or Monopoly?

You will need

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

How to play:

1 While you are playing it, think about all the math skills you are using!

2 Search hard – most games do involve some math somewhere, but if your favorite game doesn't, then try your second favorite game!

The game I played was ....

The math I spotted in it was ....

Completion date: ....

Adult initials: ....

3 **Math Snap**

Your challenge:
- Can you find equal cards?

How to play:

> **You will need**
>
> - Resource Sheet 2 cut up (or you can create your own cards)
> - At least one other person

1 Shuffle the cards from the Resource Sheet 2 and deal them between the players.

2 Play just like you would do in 'normal' snap – take turns to turn over one of your cards and place it in the middle.

3 If the two cards are equivalent, the first person to call 'snap' and place their hands on the pile of cards wins the cards. Remember, equivalent means they are worth the same, for example:
$\frac{1}{4}$ and $\frac{2}{8}$ or $\frac{1}{8}$ x 64 is 8

4 The first player to get all of the cards wins! Try to play the game at least twice.

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

and the person who won was ....

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

and the person who won was ....

Completion date: ....

Adult initials: ....

4 Money Problems

Your challenge:

- Math problems are everywhere! Can you write at least seven word problems that involve money?

You will need

- A sheet of lined paper

How to play:

1 You could base your money problems on ways you have used money during the break, or you could totally make them up.

2 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 when school starts.

Completion date: ………………..

Adult initials: ……………………..

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5 **Angles, Angles, Everywhere**

Your challenge:

- Angles are all around you. Find and measure 15 angles in your home, yard, friend's home, or around town.

You will need

- A sheet of paper or a digital document
- Protractor

How to play:

1 Search for 15 real world objects that represent acute angles, obtuse angles, and right angles around your home, friend's home, yard, or around town.

2 Every angle found, measure it and determine if the angle is acute, obtuse, or right.

3 On the paper or digital document record the 15 objects, the measurement of the angle, and the classification of the angle.

4 Share your document with your class when school starts.

Completion date: ………………

Adult initials: ………………………

6   Card Game Math

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

You will need

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

How to play:

1   Deal the entire deck between you and your partner.

2   On the count of three, both players throw down a card and quickly multiply the number on their card by the number on their partner's card.

3   Whoever gets the answer first wins the round.

4   1 point goes to the winner of each round.

5   The first player that gets 10 points first wins.

I played against ....

Who got 10 points first? ....

Completion date: ....

Adult initials: ....

THIRD SPACE
LEARNING

7 **Math Paper Scissors**

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

How to play:

You will need

- Nothing
- 2 or more players

1 Players stand facing each other. Players make two fists, and say simultaneously 'math, paper, scissors' while moving their fists up and down (like when you play "Rock, Paper, Scissors'). On scissors each player puts out between 1 and 10 fingers.

2 Players race to multiply the number of fingers they put out by the number of fingers their partner put out and call out the answer. The player who calls the correct answer first, wins a point.

3 Play for the allotted time period (for example 2 minutes).

4 Once the game is played a couple of times, begin to think about the possible answers based on the number of fingers.

I played with ....

How many rounds did you play? ....

Completion date: ....

Adult initials: ....

THIRD SPACE
LEARNING

8 **Crinkle Math Game**

Your challenge:
- Do you know your math vocabulary and math facts?

How to play:

1 Each player takes 5 slips of paper and writes 5 math words and/or math facts. Take the slips of paper with the written word or fact and crinkle it up. Place it in the bowl.

2 Once all the slips of paper are in the bowl, mix the bowl so all the slips of paper are mixed up.

3 One player selects a slip of paper from the bowl and has to get the other players to say the math vocabulary word or math fact that is on the slip of paper without actually saying the word or fact. The player can act out the word/fact or describe the word/fact. Once the other players get the word/fact, the player takes another slip of paper out of the bowl. The player has 1 minute to get the group to say as many words/facts as they can.

4 A player is awarded one point per word/fact they can get the group to say in the minute.

5 Once the minute is up, the next player will go.

6 You can play as many rounds as you want and can play in teams if you prefer.

I played with ....

Who won? ....

This game can be played by the whole family!

> ## You will need
> - Small slips of paper
> - Pen or pencil
> - Bowl
> - 2 or more players

> Completion date: ....
>
> Adult initials: ....

THIRD SPACE
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9 **Let's Go Exploring for Triangles**

Your challenge:

- Triangles are everywhere! Can you find 10 triangles in your town, yard, home, friend's home?

You will need

- A camera
- Google Slides

How to play:

1 Go exploring for triangles.

2 Find 10 triangles in the world around you.

3 When you find a triangular shaped object, take a picture of it.

4 Once you have all 10 pictures, put them in a slide show presentation.

5 Put one picture per slide. Explain what type of triangle you think it is by classifying the triangle by its angles (obtuse, acute, right) and sides (scalene, isosceles, scalene).

6 Share your slide show presentation with your class when school starts.

Completion date: ………………

Adult initials: ……………………

10 Frisbee Math

Your challenge:

- How confident are you adding 2 digit and 3 digit numbers? Can you find the sum of two numbers using mental math?

You will need

- A frisbee
- A marker
- 2 or more players

How to play:

1 Take the frisbee and write 2 digit and/or 3 digit numbers around the edge of the frisbee with the marker.

2 Go outside, one player throws the frisbee to the other player. The player catching the frisbee has to catch it with two hands.

3 The two numbers that the player's hands are touching are the two numbers the player has to sum.

4 That player then has to throw the frisbee back to the other player where the second player now has to add the two numbers together.

5 You can do this with addition, subtraction, multiplication or division.

I played with ....

Who got the most sums correct? ....

Completion date: ....

Adult initials: ....

11 How many ways?

Your challenge:
- How many calculations can you do?

How to play:

You will need

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

1 Throw the dice 4 times to generate a 4 digit number - write down that number.

2 Players then have 3 minutes to make as many different calculations where the target number is the answer.

3 1 point is given for each correct calculation, using an operation which hasn't been used before. For example, a point is given for an addition calculation but if a second addition calculation is recorded, a second point won't be given.

4 If a 3, 2, 1 and 6 were thrown, this would give a target number of 3216.

5 The players could create an addition example such as 1568 + 1648 = 3216, or a subtraction calculation such as 4536 - 1320 = 3216. Another example could be $\frac{1}{2}$ x 6432 = 3216.

I played with ....

Who won? ....

Completion date: ....

Adult initials: ....

12 Prime Number Game

Your challenge:
- How well do you know your prime numbers?

How to play:

1	Shuffle the card and deal 11 cards to each player, which they hold in their hand. The top card of the remainder of the deck of cards is turned over and is the "starting number".
2	The non-dealer (or person to the left of the dealer) adds a card from their hand that adds to the starting card to equal a prime number.
3	The next player then tries to add to that total to equal a larger prime number.
4	When a player can no longer add a card that sums up to a prime the hand is over, and the last person to make prime gets a point.
5	The first person to get 5 points is the winner.

> ## You will need
>
> - 2 or more players
> - Deck of cards (Ace = 1, Jack = 11, Queen - 12, King = 13)
> - List of prime numbers (optional)

I played with ....

Who got 5 points first? ....

> List of prime numbers: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 83, 89, 97, 101, 103, 107, 109, 113, 127, 131, 137, 149, 151, 157, 163, 167, 173, ...

> Completion date: ....
>
> Adult initials: ....

13 Roll the Place Value

Your challenge:

- Can you write 4 digit numbers in expanded form?

You will need

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

How to play:

1 Player rolls the dice 4 times. The first roll represents the thousands place, the second roll represents the hundreds place, the third roll represents the tens place and the fourth roll represents the ones place.

2 Write down the number in standard form.

3 Take the number and then write it in expanded form.

I played with ....

Completion date: ....

Adult initials: ....

14 Sidewalk Magic Square

You will need

- Sidewalk chalk
- Magic squares
- 1 or more players
- Resource Sheet 2

Your challenge:

- Can you figure out the magic square?

How to play:

1 Using the sidewalk chalk, draw a 3 by 3 square.

2 Fill in the squares with the given numbers.

3 Fill in the remainder of the blank spaces with numbers so that the sum of each row and column is the same value.

4 Whoever completes the most magic squares wins.

I played with ....

How many magic squares did you solve? ....

Who won? ....

Completion date: ....

Adult initials: ....

15 What's My Number?

Your challenge:
- Do you know enough math terms to guess the right number?

You will need

- 2 or more players

How to play:

1 Player 1 thinks of a 2-digit or 3-digit number.

2 Player 2 has to guess the number by asking questions such as, "Is the number even or odd? Is the number greater than or less than 100? Is the number a multiple of 5?"

3 Player 1 has to answer the questions. Once Player 2 guesses the number, switch places.

I played with ....

How many numbers did you guess? ....

Completion date: ....

Adult initials: ....

16 **Multiplication Bingo**

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

You will need

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

How to play:

1 Decide which person is going to be the leader.

2 Select a times table to focus on and each player writes five numbers from that times table (for example, the 4 times tables, you might write down 8, 20, 28, 36, and 44).

3 The leader of the game then calls out various expressions from the selected times table (for example, 6 x 4, 2 x 4, 11 x 4, etc...)

4 If an expression is called and a player has the answer to it on their paper, they cross out the number.

5 The winner is the person to cross out all their numbers and shout 'bingo'.

I played with ....

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

Completion date: ....

Adult initials: ....

17 Simplify the Fraction

Your challenge:
- Can you simplify the fractions?

How to play:

You will need

- 2 or more players
- Paper and pencil
- Deck of cards (Ace = 1, Jack = 12, Queen = 14, King = 15)

1   Shuffle the cards and put the deck face down.

2   Player 1 flips two cards. The card with the smaller number is the numerator and the card with the larger number is the denominator.

3   Player 1 writes the fraction on the paper and has to decide whether the fraction is in simplest form or if it needs to be simplified. If the fraction needs to be simplified, player 1 simplifies it.

4   If the player is right, they keep their cards, if they are wrong, they have to give their cards to the other player.

5   The player with the most cards at the end of the game is the winner.

I played with ....

How many fractions did you simplify? ....

Completion date: ....

Adult initials: ....

18 **Multiplication War**

Your challenge:

- How quick are you with your multiplication facts?

How to play:

> **You will need**
>
> - 2 players
> - A deck of cards (Ace = 1, Jack = 11, Queen = 12, and King = 13)

1 Deal the cards between the two players.

2 At the same time, both players turn over one of their cards from their pile and place it in the middle

3 The point of the game is to multiply both numbers together and be the first to call out the answer.

4 The first player to call out the correct answer gets to keep the cards.

5 The winner of the game is the player who has collected the most cards.

I played with ....

Who won the first game? ....

Completion date: ....

Adult initials: ....

19 **Sidewalk Chalk Number Line**

Your challenge:
- Can you jump the fraction number line?

You will need

- 2 or more players
- Sidewalk chalk
- Number line with fractions
- Index cards and pens

How to play:

1. Find a place outside to draw a number line using the sidewalk chalk and draw a number line.

2. Give each player 5 index cards to write 5 math equations of a whole number times a unit fraction (for example, select a unit fraction to use per round such as, $\frac{1}{4}, \frac{1}{3}, \frac{1}{2}$ etc...)

3. Once all the players write their equations, the leader takes the index cards and shuffles them.

4. One player at a time picks an index card. The player has to jump to the correct answer on the number line or the approximate location of the answer on the number line.

5. The player stays in their location until they select another card, then they will return to 0 and start again.

6. A point is awarded for every correct answer.

7. The player that gets to 10 points first wins.

I played with ....

Which unit fraction did you use in the first round? ....

Who won the first round? ....

Completion date: ....

Adult initials: ....

20 Water Balloon Math

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

How to play:

1 Fill 5 balloons with water.

2 Arrange players in groups of 2 or 3 about 2 feet away from each other.

3 Take turns throwing the balloon to the other player with a math fact. (For example, you might say $7 \times 12 = ?$ or $\frac{1}{2} \times 128 = ?$).

4 When the other player catches the balloon, they must say the answer.

5 Each time a player answers correctly, the player must take a step backwards.

6 The goal is to answer as many math equations correct before the water balloon breaks.

7 If it's a warm day, do 5 rounds!

I played with ....

Who won the first round? ....

You will need
- Balloons
- Water
- 2 or more players
- Marker

Completion date: ....

Adult initials: ....

Resource Sheet 1: Who Creates the Most Laundry?

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

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

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

Key: 👕 = 2 clothing items

Pictogram Chart Title: ………………………………………………………………………….

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Resource Sheet 1: Who Creates the Most Laundry?

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

....

....

....

....

....

....

....

....

Resource Sheet 2: Magic Squares

		8
9		1
	7	

	9	
3		
8		6

		6
3		7
		2

		4
		3
6		8

	7	
9		1
4		

		2
1		
8	3	

0-9 Digit Cards

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

0-9 Digit Cards

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

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

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

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

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