GRADE 5 MATHEMATICS

Blackline Masters

BLM 5.N.1.1: Place Value

1. Use the digits in the box to answer these questions:



- a) What is the largest 4-digit number you can make? _____
- b) What is the smallest 4-digit number you can make? _____
- c) Make a number that has a 4 in the thousands place _____
- d) Make a number that has a 1 in the hundreds place _____
- e) Make a number that has a 9 in the tens place _____
- 2. Write each number in words:
 - a) 6 784 _____
 - b) 1 032
- 3. Write in expanded notation:
 - a) 3 154 _____
 - b) 2 806
- 4. Order the numbers 6 341, 8 764, 6 781, 5 976, 8 695 from smallest to largest.
- 5. What whole number comes immediately after?
 - a) 499
 - b) 109 ____
 - c) 1000 _____
 - d) 9999 _____





BLM 5.N.1.2: Place Value Headings (continued)



Hundred Thousands

Which Do You Prefer — **Chunky** or *Smooth*?

In her book called *Which Do You Prefer — Chunky or Smooth?*, Heather Brazier tells us the following:

On an average day in Canada ... we consume eighty thousand, eight hundred forty-nine kilograms of peanut butter. Of the total, 20 212 kg are chunky... (46)

Re-write the number words using numerals.

Re-write the words using numerals.

Express both numbers in expanded notation.

How much smooth peanut butter must be eaten by Canadians on an average day?

BLM 5.N.2.1: Situation Cards

You need to buy a new coat and a pair of shoes. You have \$100 and you want to know whether you have enough money before you get to the check-out counter.	You just finished eating in a restaurant and you want to know if your bill is correct.
A car salesman needs to calculate the amount of tax on the new car you just bought.	The art teacher has a shelf with red, blue, and green paper on it. She wants to know if she has enough paper for the class.
The school division needs to know how many 4 th and 5 th graders there are so it can order buses to take them to the music festival.	You and two of your friends decide to share a bag of marbles. You need to know the number of marbles you should get.

BLM 5.N.2.2: Estimation Situations

Mrs. Chan is having a party. She is serving sandwiches, pizzas, and cookies. There are 30 people coming to the party and she needs to order pizza. Should she underestimate or overestimate the amount of pizza each person will eat? You are forecasting the speed of a storm. As the storm is moving toward a nearby town, a decision must be made when to evacuate the town. Should you underestimate or overestimate the speed of the storm?

Your bus is leaving at 3:00 p.m. and it usually takes you 40 minutes to get to the bus station. Should you underestimate or overestimate the amount of time you need to get to the station? You are putting a new elevator into a building. You need to put a sign in the elevator that shows its capacity. Should you underestimate or overestimate the capacity of the elevator? BLM 5.N.3.1: Tic-Tac-Toe Grids











BLM 5.N.3.2: Division Puzzle

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

ëveryone 4	Everyone
Ëveryone	Everyone
Everyone	Everyone 7
Everyone	Everyone
	Everyone

BLM 5.N.3.3: Everyone Cards

BLM 5.N.3.4: Single Digit Multiplication Chart

Student Name: _____ Date: _____

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

zero facts	five facts (clock faces)
ones facts	threes facts
two facts (doubles)	fours facts
nines facts	last nine



BLM 5.N.4.1: Multiplication Problems

Mrs. Clifford bought four oranges. If each orange cost 20 cents, what was the total cost of the oranges?

Mr. McClure gave 10 crayons to each of the students in his art class. If there are 20 students in his class, how many crayons did he give out?

The students at Montclair Middle School were collecting cans to raise money for a local charity. At the end of the first week, they had collected enough cans to fill 30 boxes. If each box holds 20 cans, how many cans did the students collect?

Myrna bought eight trays of cookies. If there are 40 cookies on a tray, how many cookies did Myrna buy?

BLM 5.N.4.2: Game Sheet

Change 55 to 550 in one input Change 6 to 420 in one input Change 20 to 800 in one input Change 30 to 270 in one input Change 2 to 180 in one input Change 40 to 2 000 in one input Change 13 to 130 in one input Change 8 to 160 in one input Change 30 to 900 in one input Change 15 to 150 in one input Change 50 to 2 500 in one input Change 4 to 400 in one input Change 60 to 600 in one input Change 14 to 2 800 in one input Change 8 to 2 400 in one input Change 70 to 5 600 in one input Change 90 to 8 100 in one input Change 7 to 2 100 in one input Change 16 to 3 200 in one input Change 90 to 3 600 in one input

BLM 5.N.4.3: Products

A. Perry found the product of 48 x 7 by thinking

 $50 \times 7 = 350 \text{ and } 2 \times 7 = 14.$ 350 - 14 = 336

Use Perry's method to solve these problems. Show your thinking.

- 1. $5 \times 68 = \Box$
- 2. 47 **x** 3 = □
- 3. $4 \times 89 = \Box$
- 4. 9 **x** 19 = □
- 5. 37 x 4 = □
- 6. $3 \times 99 = \Box$
- 7. 7 x 26 = \Box
- 8. 5 x 88 = \Box
- 9. 48 x 3 = □
- 10. 9 x 44 = □
- B. Now solve these problems, choosing a strategy for each. Show your thinking.
 - 1. $6 \times 25 = \Box$
 - 2. 8 x 77 = \Box
 - 3. 14 x 35 = □
 - 4. $18 \times 8 = \Box$
 - 5. 56 x 5 = \Box

BLM 5.N.5.1: Multiplication Methods

Name: _____ Group Member: _____

We are going to work with three multiplication methods today. Each method has advantages and disadvantages. When performing multiplication tasks, you may choose any of these methods, depending on the question being asked and how efficiently you can work with that method.

For today's activity, you will use each method once, but work with your group to explain all the methods.

Example: 49 x 37 = 1813

Method 1: Array Method

Work	Explanation

Method 2: Vertical Method

Work	Explanation

Method 3: Compressed Vertical Method

Work	Explanation

Question 1:

Method:

Work	Explanation

Question 2:

Method:

Work	Explanation

Question 3:

Method:

Work	Explanation



BLM 5.N.6.1: Division Problem Cards



BLM 5.N.6.1: Division Problem Cards (Continued)

BLM 5.N.6.2: Division Playing Board

DIVISION PLAYING BOARD	
100	108
101	109
102	110
103	111
104	112
105	113
106	114
107	115

DIVISION PLAYING BOARD	
100	108
101	109
102	110
103	111
104	112
105	113
106	114
107	115





$$\frac{1}{3} = \frac{2}{6}$$

$$\frac{1}{4} = \frac{3}{12}$$

$$\frac{2}{5} = \frac{4}{10}$$

$$\frac{2}{3} = \frac{6}{9}$$









BLM 5.N.7.1: Equivalent Fraction Cards (Continued)

$$\frac{3}{4} = \frac{9}{12}$$
$$\frac{1}{5} = \frac{3}{15}$$











$$\frac{3}{5} = \frac{6}{10}$$

$$4 \quad 12$$

$$\frac{4}{5} = \frac{12}{15}$$

$$\frac{1}{6} = \frac{2}{12}$$

BLM 5.N.7.1: Equivalent Fraction Cards (Continued)



BLM 5.N.7.1: Equivalent Fraction Cards (Continued)

$$\frac{1}{7} = \frac{3}{21}$$

$$\frac{4}{14} = \frac{2}{7}$$

$$\frac{2}{20} = \frac{1}{10}$$

$$\frac{5}{10} = \frac{1}{2}$$

$$\frac{4}{6} = \frac{2}{3}$$











BLM 5.N.7.2: Fraction Cards


































BLM 5.N.7.2: Fraction Cards (Continued)























0.165	$\frac{165}{1000}$	0.003	$\frac{3}{1000}$
0.3	$\frac{3}{100}$	0.012	$\frac{12}{1000}$
0.201	$\frac{201}{1000}$	0.005	$\frac{5}{1000}$
0.12	$\frac{12}{100}$	0.21	$\frac{21}{100}$
0.30	$\frac{30}{100}$	0.050	$\frac{50}{1000}$
0.487	$\frac{487}{1000}$	0.874	$\frac{874}{1000}$



BLM 5.N.10.1: Decimal Recording Sheet

BLM 5.N.10.2: Decimal Cards





BLM 5.N.11.1: Number Frames

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(Continued)
Frames
Number
5.N.11.1:
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•	•	
0	0	

BLM 5.N.11.2: Decimal Activity

Use the numbers in the box to solve the following problems. Explain your thoughts for each one.

8.038	15.169
	5.64
6.45	9.708
0.725	0.356

- 1. Find two numbers whose sum is greater than 22 and less than 24.
- 2. Find two numbers whose difference is between 5 and 6.
- 3. Find two numbers whose sum is 7.175.
- 4. Find three numbers whose sum is between 12 and 13.
- 5. Find two numbers whose difference is 5.284.

BLM 5.PR.1.1: Pattern Problem 1

Problem A

Angela is making a pattern with the coloured block tiles. The first three terms of her pattern look like this.



How many tiles will she need to make the tenth term?



BLM 5.PR.1.1: Pattern Problem 1 (Continued)

Name: _____

Angela's Pattern

1. How many tiles does Angela need to make the tenth term of her pattern? Show how you found this out.

2. Make a table that shows how Angela's pattern increases.

3. Describe what happens in each term.

4. How many tiles will Angela need for the 100th term of her pattern?

BLM 5.PR.1.2: Pattern Problem 2





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BLM 5.PR.1.5: Pattern Activity

Name _____

- 1. Complete each pattern.
 - a) 0, 4, 8, 12, 16, ____, ____, ____
 - b) 85, 75, 65, 55, 45, ____, ____,
 - c) _____, 14, 21, 28, _____, ____, 49
 - d) 3, 5, ____, 12, ____, 23, 30
- 2. Write the rule that explains how the pattern continues.

	Pattern	Rule
a)	6, 14, 22, 30,	
b)	1, 3, 5, 7,	
c)	24, 21, 18, 15,	
d)	1, 2, 4, 8, 16,	

BLM 5.PR.2.1: Equation Problem

Problem A

Daniel found 10 smelly bugs in his backyard. He put them in a box, but four of them managed to escape. How many bugs does he have now?

Which equation best fits this story problem?

$$10 + 4 = b$$

 $b = 10 - 4$
 $4 \times 10 = b$

Problem B

Michael is 8 years old. His brother Charles is twice as old as he is. How old is Charles?

Which equation best fits this story problem?

$$8 + 2 = c$$
$$2c = 8$$
$$c = 2 \times 8$$

BLM 5.PR.2.2: Equation Activity

Name _____

Circle the equation that fits the problem.

1. Vincent bought a pizza. The pizza was divided into eight pieces. Vincent ate some of them and left three pieces for his little sister. How many pieces did he eat?

8 + 3 = p $3 \times 8 = p$ 8 - p = 3

2. Bonnie bought a video game and a book to read to her nieces and nephews. The video game cost 25 dollars. Together, the video game and the book cost \$40. How much did the book cost?

25 + b = 40 25 - b = 40 40 - 25 = b

3. Lisa split her bottle cap collection evenly with Marcie and William. If she started with 39 bottle caps, how many did each person get?

 $x = 3 \times 13$ $x = 39 \div 13$ $x = 39 \div 3$

4. It takes Mr. Olsen six minutes to run one kilometre. Yesterday, he ran 10 km. How long did it take him?

 $t = 6 \times 10$ t = 6 + 10 $t \div 10 = 6$

5. Write the equation that best fits this story problem.

On Monday, Maggie planted some flowers in her backyard. On Tuesday, she planted six flowers. Altogether, she planted 20 flowers in her yard. How many flowers did she plant on Monday?

BLM 5.PR.2.3: Word Problems

Britta's favorite magazine is 42 pages long. She has read some pages, but still has 14 more pages to read. How many pages has Britta read?

Brice has 65 hockey cards. On Friday, he bought 14 more cards. How many cards does he have now?

Marshall's dog weighs 17 kg more than Bart's dog. The two dogs weigh 85 kg together. How much does Bart's dog weigh?

Sonia and her friends are playing a game of cards. Sonia deals 48 cards evenly to all the players. Each player gets eight cards. How many players are there?

Mark is four times as old as Tom. Tom is six years old. How old is Mark?

Joe has twice as many baseball cards as Susie. Joe has 46 cards. How many cards does Susie have?

BLM 5.PR.2.4: Equation Activity

Name _____

Circle the unknown in each equation. Then solve the equation.

- 1. x + 12 = 24
- 2. 26 = 2C
- 3. 14 r = 6
- 4. 15 + x = 37
- 5. 7 = y 18
- 6. 16 + 42 = a
- 7. 3b = 33
- 8. *z* = 68 15

BLM 5.SS.1.1: Perimeter and Area Recording Sheet

Add the appropriate units.

Length	Width	Perimeter	Area

BLM 5.SS.2.1: Assessing Prior Knowledge

		Estimate: Measurement:
		Estimate: Measurement:
W	hat unit of measure would you use to find the foll	owing:
a)	The distance around a bison?	
b)	The amount of paper you would need to cover	the bulletin board?
c)	How far you can throw a softball?	
d)	Your hand span?	
e)	The mass of an apple?	
Na	ame an object that has a length of approximately 1	metre.
Na	ame an object that has a length of approximately 1	cm.
W loi	hich is longer, a piece of wood that is 1 m long or ang?	a piece of wood that is 10 c
A	tree in Kelley's backyard is 2 m tall. How many cr	n tall is the tree?

BLM 5.SS.2.2: Measurement Activity

1. Estimate and then measure the length of each item listed in the chart. Record your estimates and measurements in the appropriate column.

Item	Estimate	Measurement
Length of a toothpick		
Width of a safety pin		
Length of your math scribbler		
Perimeter of an index card		
Length of a crayon		
Length of a soda straw		

2. List three objects whose length you would measure in millimetres:

- 3. On the back of this page, draw, without measuring, a line segment you think is
 - a) 70 mm long
 - b) 100 mm long

Measure each line segment you drew and record its actual length beside it.

BLM 5.SS.2.3: Line Cards









Cards
asurement
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For the drawing mm variation of metric 210

metric 210	metric 210	metric 210	metric 210	metric 210
10	20	30	40	20
metric 210 metric 210				
60	20	80	60	100
metric 210				



For the drawing cm variation of metric 210

metric 210	ß	metric 210 metric 210	10	metric 210
metric 210	4	metric 210 metric 210	O	metric 210
metric 210	M	metric 210 metric 210	$\mathbf{\infty}$	metric 210
metric 210	N	metric 210 metric 210		metric 210
metric 210	~1	metric 210 metric 210	9	metric 210

BLM 5.SS.2.5: Measurement Table

Object	Unit (m. cm. mm)	Estimate	Actual length	Points (0 or 1)
			8	()



BLM 5.SS.2.6: Line Segments (Continued)

Line	Measurement to	Measurement to
Segment	near est cin	ilearest illin
А		
В		
С		
D		
Е		
F		
G		
Н		
Ι		
J		

I have 100 mm. Who has ½ of me plus 5 mm (in mm)?	I have 200 cm. Who has me in metres?	I have 1700 mm. Who has me divided by 100 (in mm)?
I have 500 mm. Who has me minus 40 cm (in mm)?	I have 1300 mm. Who has me plus 70 cm (in cm)?	I have 170 cm. Who has me in mm?
I have 50 cm. Who has me in mm?	I have 110 cm. Who has me plus 200 mm (in mm)?	I have 160 cm. Who has me minus 20 cm plus 300 mm (in cm)?
I have 100 cm. Who has ½ of me (in cm)?	I have 10 cm. Who has 1 metre more than me (in cm)?	I have 2000 mm. Who has me minus 40 cm (in cm)?
I have 1 metre. Who has me in cm?	I have 30 mm. Who has 7 cm more than me (in cm)?	I have 2 metres. Who has me in mm?

BLM 5.SS.2.7: I Have, Who Has...?

I have 60 cm. Who has me in mm?	I have 40 cm. Who has double me plus 100 mm (in cm)?	I have 1600 mm. Who has me minus 60 cm (in m)?
I have 150 cm. Who has 1/3 of me plus 10 cm (in cm)?	I have 1400 mm. Who has me less a metre (in cm)?	I have 180 cm. Who has ½ of me plus 700 mm (in mm)?
I have 20 cm. Who has me plus a metre and 30 cm (in cm)?	I have 140 cm. Who has me in mm?	I have 30 cm. Who has me times 5 plus 30 cm (in cm)?
I have 200 mm. Who has me in cm?	I have 360 cm. Who has ½ of me minus 400 mm (in cm)?	I have 900 mm. Who has 60 cm less than me (in cm)?
I have 17 mm. Who has me plus 183 mm (in mm)?	I have 600 mm. Who has me plus 3 metres (in cm)?	I have 90 cm. Who has me in mm?

BLM 5.SS.2.7: I Have, Who Has...? (Continued)

BLM 5.SS.3.1: Volume Activity

Follow the instructions below. Be sure to record your thoughts.

1. Cut a 1-cm square from each corner of a 20-cm by 20-cm sheet of grid paper (see diagram below).



2. Fold up the four 1-cm sides and tape to form an open box that is 1-cm deep. Find the volume of the box.



- 3. Predict what will happen to the volume if you cut larger and larger squares from each corner. Record your predictions on a chart.
- 4. As a group, construct as many open boxes as possible and record the volume of each open box.
- 5. How close were your predictions to the volume of the open boxes?
- 6. Explain what happened to the volume when larger squares were cut from the corners.
- 7. Write a group report about what you have learned.

BLM 5.SS.4.1: Capacity Procedure

Follow the steps below to make your own measuring device.

- 1. Put a piece of masking tape down the side of a glass (or jar).
- 2. Fill a small container with spoonfuls of water, keeping track of the number of spoonfuls needed to fill it.
- 3. Empty the water in the small container into the glass.
- 4. Mark the level of the water and the number of spoonfuls on the tape.
- 5. Fill the small container again. Empty the water into the glass. Mark the level of the water and the total number of spoonfuls.
- 6. Continue filling and marking the glass until the top is reached.

Container	Estimated Capacity	Actual Capacity	
		First	Second
		Method	Method



BLM 5.SS.6.1: Quadrilateral Name Cards

BLM 5.SS.6.2: Quadrilateral Cards



BLM 5.SS.6.2: Quadrilateral Cards (Continued)



All sides congruent

BLM 5.SS.6.3: Quadrilateral Activity Sheet

1. Give all the names that apply to each of these shapes.



2. Draw a rectangle that is not a square.

3. Draw a trapezoid that is not a parallelogram.
BLM 5.SS.6.3: Quadrilateral Activity Sheet (Continued)

4. Write a sentence describing the relationship between rectangles and parallelograms.

Is this statement true or false? All trapezoids are rhombuses.
Explain why you think the statement is true or false.





BLM 5.SS.7&8.2: Transformation Cards

Original Position

Translation

Reflection

Rotation

BLM 5.SP.1&2.1: Prior Knowledge

1. Louis is doing a project on animals. He found that animals have different heart rates. For example, he found that a cow has a heart rate of 60 to 80 beats per minute. Here are some of the heart rates he found.

Cow	60 to 80	Cat	110 to 140
Horse	30 to 40	Chicken	300 to 350
Rabbit	140 to 160	Sheep	70 to 140

Make a bar graph of the highest heart rate of each animal.

2. Study your graph. List 3 conclusions you can draw from it.

3. If you added the heart rate of a mouse to your graph, which animals do you think would have a slower heart rate than the mouse? Explain your answer.

BLM 5.SP.1&2.2: First- and Second-Hand Data

Sort the following statements into two groups in as many ways as you can. Record your findings.

- Names of the highest mountains in North America
- Students in the class who have pets
- The won/lost record of the Winnipeg Goldeyes
- The makes of cars parked in a shopping centre parking lot
- The sum of the numbers rolled when two dice are thrown
- The population of Canadian provinces
- The number of people who have immigrated to Manitoba
- How far students in Grade 7 can throw a softball
- The number of cm a plant grows over a five-week period
- The number of houses sold in Winnipeg last year

BLM 5.SP.1&2.3: Candy Graph

Name: _____

Group Members: _____

- 1. What candy is in your packages?
- 2. Estimate the number of pieces of candy in a package. Estimate._____
- 3. List all the colours (shapes or sizes) of the pieces in the packages in first column of the chart

Candy colours	Number of each colour in the first package	Number of each colour in the second package

- 4. Open the first package of candy and sort by pieces into colour groups. Record the number of pieces of each colour in the chart.
- 5. Open the second package of candy and sort the pieces into colour groups. Record the number of pieces of each colour in the chart.
- 6. Help the other members of your group make a double bar graph that compares the colours of candy found in each package.
- 7. Study your graph. What conclusions can you make? ______
- 8. If you bought another package of candy, how many of each colour would you expect to find? Explain your answer.
- 9. Give your answer to the following question: How assorted is a package of assorted candies? Explain your reasoning.

BLM 5.SP.3&4.1: Probability Label Cards

Cut out and fold on the dotted line.

Impossible

Less Likely

More Likely

BLM 5.SP.3&4.1: Probability Label Cards (Continued)



Cut out each of the following statements:

I will go to school tomorrow.

I will play a Computer game today.

It will snow in January.

There are more students in my Class who are left-handed than right-handed.

I will walk to school today.

Someone will win the provincial lottery twice in one year.

The sun will rise tomorrow.

I will drink a glass of milk today.

If I drop a piece of bread on the floor, it will land butter-side up.

I will be 10 feet tall when I grow up.

BLM 5.SP.3&4.2: Probability Activity

The students in Mr. Steiner's class are going to play three games. In each game, some blocks will be placed into a box. Each block will be either red or white. One block will be taken out and then put back in the box. If the block is red, the girls will win a point. If the block is white, the boys will win a point.

Blocks for Game 1

Blocks for Game 2







Blocks for Game 3

- 1. Which game will the boys most likely win? Why? ______
- 2. Which game are the girls least likely to win? Why? _____
- 3. Which game is impossible for the boys to win? Why? _____
- 4. Which game is equally likely that the boys or girls win? ______
- 5. Which game is fair? Why? _____

BLM 5.SP.3&4.3: Spinner Statements

Examine the following statements about the spinner and decide whether the statements are true or false. Check your predictions by spinning the spinner 20 times and recording the result of each spin.



Statements:

It is more likely to land on 4 than on 1, 2, or 3.

It is less likely to land on 1 than 3.

It is equally likely to land on 1 as 2.

BLM 5.SP.3&4.4: Experiment

Place three two-coloured chips in a cup. You are going to spill them out on your workplace and record the number of chips that are the same colour. Do this 25 times. Keep a record of the number of times all three chips are the same colour and the number of times at least one chip is a different colour.

Before doing this experiment, predict:

- 1. Are you more likely or less likely to end up with at least one chip a different colour than the others?
- 2. Are you more likely or less likely to end up with at all three chips the same colour?

Do your results match your predictions? Explain.

BLM 5.SP.3&4.5: Mystery Spinner

Use the following clues to make the mystery spinner: It is more likely that the spinner will stop on red. Stopping on green or blue is equally likely.

Write a paragraph explaining why your spinner matches the conditions for making it.

Design a spinner that meets these conditions:

Stopping on the number 5 is impossible Stopping on the number 3 is certain

Spin your spinner 20 times. Keep a record of where the spinner stops. Do your results match the conditions for making the spinner? Explain.

BLM 5.SP.3&4.5: Mystery Spinner (Continued)

Design a spinner that matches these conditions:

The spinner has eight sections At least two results are equally likely One event is less likely than all the others One result is more likely than all the others

Write a paragraph explaining why your spinner matches the conditions for making it.

