### September - Grade 7 Math

			Collect a graph from a newspaper or magazine. Is there a bias? What can you conclude from this	Which of the following numbers are a perfect square: 24, 36, 48, 64, 81, 96?
Use algebraic expression for the following pattern: 5, 10, 15, 20, 25,	6 Convert decimals to percent: 0.50, 0.75, 0.33, 0.40	7 Find the unit price: 6 cans of pop for \$2.99	8 Use algebraic expression for the following pattern: 21, 28, 35, 42, 47	9 Solve the following: 2 x 4(12 - 8) =
If there are 10 pennies in a piggy bank with 80 coins, what percent of coins are pennies?	Solve the following: 225.005 ÷ 5 =	14 25 kg of Ryan's Famous Potatoes cost \$12.95 and 10 kg of Gillian's Potatoes cost	What is the difference between a census and a sample from a population?	Collect a graph from a newspaper or magazine. What trends and patterns do you notice?
Order the following integers, from greatest to least: -3, 2, -8	20 Solve 9 + (13 -10) ÷ 3	21 Find the square root of 121	22 Solve the following: (14.6 + 1.4) x (2.9 - 0.4)	Order the following integers, from least to greatest: 0, +3, -3
If there are 5 blue marbles in a bag of 20 marbles, what percent of marbles are blue?	Describe the pattern in words and using a variable: 5, 8, 11, 14, 17,	If there are 20 school days in September, what percent of days are spent in school?	Put the following decimals in order, smallest to largest: 9.1, 9.01, 9.05. 9.99, 9.15	

Wednesday **Thursday Friday Monday Tuesday** November - Grade 7 Math Collect a graph from a Order the following Use algebraic Solve the following: newspaper or magazine. Is integers, from greatest to expression for the  $225.005 \div 5 =$ there a bias? What can you following pattern: least: conclude from this graph? 12, 17, 22, 27, 32, ... -4, -10, -2 7 10 11 If there are 12 dimes in Describe the pattern in Convert to a decimal: If there are 12 dimes Convert to a percent: a piggy bank with 40 words: 15 / 18 in a piggy bank with 40 3 / 25 7, 21, 63, 189, .... coins, what percent of coins, what percent of coins are dimes? coins are NOT dimes? 10 12 14 13 Collect a graph from a Convert 22 % to a Construct a frequency Which of the following Convert to a fraction: newspaper or magazine. fraction. Represent 0.55 a fraction table to organize the numbers are a perfect square: 24, 36, 48, 64, What trends and patterns and per cent. following data: 15, 17, 13, do you notice? 15, 14, 17, 17. Describe 81, 96? 17 18 20 21 Estimate the area of your Order the following Solve the following: Which of the following Convert decimals to bedroom floor using steps,  $28 \div 2(4 + 3) =$ statements is correct? integers, from least to fractions: 0.25, 0.1, 0.6, remember that one big step -5 is less than -3 greatest: 1.2, 5.5 is about 1 metre long. • -9 is greater than -4 +4, +2, +9 29 30 You wake up with a Convert 2 / 7 to a percent temperature of -3°C outside and decimal. and it changed to +5°C by noon. Is it warmer or colder at noon?

#### December - Grade 7 Math

			IVICATI	
			Which would be larger, the area of your bedroom floor, or the area of your bedroom walls? How do	Paint costs \$16 per Litre, how much would 250 mL of paint cost?
Which of the following statements is correct?  -5 > -2  -3 > -4	6 Which two algebraic expressions are the same? 3x + 1 1 - 3x 1 + 3x	7 Order the following integers, from least to greatest: 99, -99, 51, 1	8 If x is a positive number, what value is larger, 3x + 1 Or 3x - 1?	9 Order the following integers, from greatest to least: -15, -25, -9, -3
Add the following integers: (+3) + (-3)	Add the following integers: (-9) + (+11)	If you owe \$9 and you repay \$5, how much do you still owe?	15 If you borrow \$11 on Monday, \$4 on Tuesday and \$8 on Wednesday how much have you borrowed? Write this as a negative integer.	If there are 13 school days in December, what percent of days are spent in school?
19 For the equation 4z -1 create a t-chart to show the term number and value, e.g., Term (z) Value	20 If 5p + 17 = 67. What is the value of p?	If you are wrapping a gift box that is 30 cm X 30 X 60 cm, what is the area of wrapping paper you will	An object has an area of 10m <sup>2</sup> , how many cm <sup>2</sup> is that?	Circle the images that have parallel lines $\parallel$ , $\times$ , $\nabla$ , $\vee$ , $\Box$ , $\exists$ , $3$
Circle the images that have angles greater than 45°	What is the difference between a similar and congruent shape?	Order the following integers, from least to greatest: +15, -12, +3, 0	29 Add: (+15) + (-13)	30 Solve the following: 64.087 x 8 =

Monday	Tuesday	Wednesday	Thursday	Friday
Janua	ry - Gra	de 7 M	ath	
Draw a parallelogram and use one line to create two unequal trapezoids.	3 Which two algebraic expressions are the same? 4t + 2 4 - 2t 2 + 4t 2- 4t	If paint costs \$2 per square meter, about how much would it cost to paint your bedroom.	If there are 21 school days in October, what percent of days are spent in school?	6 Happy New Year!
9 Which of the following statements is correct?  • -32 > -5  • -9 < -13  • -33 < -19	10 Order the following integers, from least to greatest: 15, -30, -25, 4, -15	11 What is the difference between a parallelogram and a trapezoid?	Create a number line from -20 to +20. Find all of the ways you can use addition and subtraction to find an answer of 7 (e.g., 20 -	13 Order the following integers, from greatest to least: -4, 0, 3, -2, 6
Add the following: (+11) + (-8). What would you need to do to end up with an answer of -10?	17 Order the following integers, from least to greatest: +1, 0, +2, -1, -	18 Order the following integers, from greatest to least: 11, -12, 13, -14, 15	19Create a number line from -15 to +15. Find all of the ways you can use addition and subtraction to find an answer of 8 (e.g., 15-7 = 8, or -14+ 22=8)	What is the area of a trapezoid that has a height of 2 cm and the two parallel sides have a length of 5 cm and 10cm?
An object has an area of 10m <sup>2</sup> , how many cm <sup>2</sup> is that?	24 Add the following: (-12) + (+9)	25 If $5x + 2 = 17$ . What is the value of x?	26 Draw a parallelogram and use one line to create two equal trapezoids.	27 Sally uses 2 trapezoids to create a hexagon. The hexagon has an area of 90 cm², what is the area of the trapezoids she used. Sketch the hexagon. What is the perimeter of the hexagon?
30 If the trapezoid from the previous question has a height of 5cm and the length of one of the parallel sides is 12 cm, what is the length of the parallel size other side?	31 For the equation 5t + 2t create a t-chart to show the term number and value, e.g., Term (t) Value			Circle the images that have perpendicular lines ⊢,⊣,≠,△,∗,⊢

## February - Grade 7 Math

6
Order the following integers, from least to greatest:
-40, 45, -50, 55, 75, -35

- 13 Sally uses 6 equilateral triangles to create a hexagon. The hexagon has an area of 108 cm², what is the area of the triangles she used. Sketch the hexagon. What is the perimeter of the hexagon?
- 20 For the equation 2n + 1, create a t-chart to show the term number and value.

e.g., Term (n) Value

1 3
2 5

27 Which of the following statements is correct?

- -3 < -5
- -9 > -31
- -33 < 10

7
Draw three different triangles that have one side 2cm long and one side 4cm long. Which triangle has the greatest area?

14
Order the following integers, from greatest to least: +4. +10. -15. -33

What is larger, half of 20 or a fifth of 20?

28 Which of the following shapes are congruent?

 $\forall, \triangle, \gg, \triangleleft, \triangleright$ 

Order the following integers, from least to greatest:

9, -36, -61, 75, -35, -100

8
If 7t + 4 = 60, what is the value of t?

15 Order the following integers, from greatest to least:

+4, -5, -8, +9, +8, -6

22 Solve:

10 x ½
10 ÷ ½

29 Input Output

2 4
4 8
6 12

2 Create a number line from -20 to +20. Find all of the ways you can use addition and subtraction to find an answer of - 6 (e.g., 20 -26= -6, or -7+1=-6)

9 Create a number line from -15to +15. Find all of the ways you can use addition and subtraction to find an answer of - 4 (e.g., 14-18= -4, or -11+7=-4)

16 Which of the following shapes are similar?

 $\otimes$ ,  $\otimes$ ,  $\oplus$ ,  $\odot$ 

Imagine a tent being put up at Brant Park.
It is a triangular prism (made up of 3 rectangles and 2 congruent triangles).

Order the following integers, from greatest to least:

11, 44, -33, -22, -55, 66

10 Add: (-7) + (+4). How much more would you need to add to reach +3?

17
If a car travels 50 km per hour, how far will it travel in 5 hours? How long will it take to travel 325km?

24
Imagine a spinner divided into 4 equal sections.
Three sections are coloured red and one is coloured green. If you were spinning the spinner to see who goes first in a baseball game, would each team have an equally likely chance of

going first? Explain.

#### March - Grade 7 Math

Imagine a square based pyramid in Egypt. How many faces, edges, and vertices would it have?

12 Which is greater,

 $(\frac{5}{8} + \frac{1}{2})$  or  $(\frac{1}{4} + \frac{7}{8})$ ?

19
Find the missing value that would make the following statement true:

$$\frac{\Box}{3} + \frac{1}{2} = \frac{5}{6}$$

26

Find or imagine the shape of a kleenex box. How many faces, edges, and vertices does it have? What if you had 3 kleenex boxes, how many faces, edges and vertices would you have altogether then?

6 Solve:

 $12 \times \frac{1}{3}$  $12 \div \frac{1}{3}$ 

13If the theoretical probability of rolling a "3" on a die is 1/6, predict how many times the outcome will be "3" if you roll the die 12 times.

20 Write each decimal as a percent.

- a) 0.37
- b) 1.36
- c) 0.4732

Which pairs of fractions are equivalent?

1/3, 9/24, ½, 9/27 14/28, 2/5, 18/45, 3/8 7 Imagine a number cube with one different number on each face. What is the probability that I would roll any number? Express this probability as a percent.

List the possible outcomes in each case:

- Flipping a Coin
- Rolling a Six-Sided Die
- Rolling a 12-Sided Die

Use a tree diagram to show the possible combinations when flipping a penny and a nickel.

How many different outcomes are there for the following spinner?

8 Imagine a spinner divided into 3 equal sections. Two sections are coloured red and one is blue. If you were spinning to see who goes first in a game, would each team have an equally likely chance of going first? Explain.

Write the opposite of the following integers: -7. +31. -22. +3. 0

22 Solve: 10 **x** 0.8 10 ÷ **0.8** 

29 Input Output

2 5
4 9
6 13
8 17 If x is a negative number, what value is larger, 3x + 1 or 3x - 1?

Express in kilograms.

- a) 47g
- b) 351g
- c) 14 000mg

16 Joleen says, "The probability of spinning green is 3/4." Ahn says, "The probability is 75%."

Who is right? Explain.

23Add the following fractions and represent them in the lowest terms.

- a) 2/5+4/5
- b) 3/3+1/8+2/6
- c) 1/3+6/9

30For the previous table a)Describe the pattern in the Output Column

- b) Describe how you can find the output number when given the input
- c) Determine the output value when the input value is "16"

Monday	Tuesday	Wednesday	Thursday	Friday
April -	Grade	7 Math		
2 (Use the figure on April 24) Sketch the net of the following Hexagonal Right Prism.	3 Use an integer to represent each statement. • seven degrees Celsius below zero • a loss of eleven points • five seconds after liftoff • seventeen steps down • a profit of twenty-nine dollars	There is a probability of 15% chance of rain in today's forecast. Should I carry an umbrella or wear a coat? What if there was a 90% chance of rain? Explain how you made your decision.	5 Record the probability for precipitation over the next week, then record how often the outcome of 'precipitation' occurred. What do you notice?	Draw a diagram to show each fraction as part of a whole.  a) 1/5 b) 3/8 c) 4/9 d) 2/4
9 Express the following in millilitres. a) 22L b) 0.6L c) 1.25L	10 Use a tree diagram to show the possible combinations when rolling two 6-sided die.	11 Solve: $8 \times \frac{3}{4}$ $8 \div \frac{3}{4}$	12 Solve: 16 x 0.5 16 ÷ <b>0.5</b>	Demonstrate, using a sketch or concrete materials the following repeated addition of a fraction. $\frac{1}{2} + \frac{1}{2} + \frac{1}{2}$
as a decimal. a) 45 b) 73% c) 97%	I have five different coins in my pocket. What is the probability of picking any one coin out of my	18Multiply the following fractions and represent them in the lowest terms.  a) ½ of 18 b) 1/9 of 54 c) 3/7 of 28	19 Which is greater, $(\frac{3}{4} + \frac{2}{3})$ or $(\frac{5}{8} + \frac{3}{4})$ ? Write each in decimal form.	Determine the surface of a rectangular prism measuring 10 cm in length, 5 cm in width, and 20cm in height.
23A right prism is a prism whose rectangular faces are perpendicular to its congruent base. Identify the rectangular faces on each prism and try to find 2 real life examples of each:	24 Hexagonal Right Prism:	25	26	27

# May - Grade 7 Math

30

Find the missing value that would make the following statement true:

$$\frac{1}{8} + \frac{\square}{2} = \frac{5}{8}$$

7 Solve:

26 x 0.5

26 ÷ **0.5** 

14There is a probability of 10% chance of snow in today's forecast. Should I wear my boots? What if there was an 80% chance of snow? Explain how you made your decision.

2

When multiplying and dividing integers, and one is positive and one is negative, what will the result/answer always be?

28

How many different outcomes are there for the following spinner?

1

What fraction of the letters in your first name are vowels? What fraction of the letters in your first name are consonants?

8

Make a list of items found in your kitchen that use fractions (hint, look in some cook books)

15

Order the following from greatest to least:

1/2, 1/4, 5/8, 2/3, 7/8

22

Order the following from greatest to least:

1/2,1/43/45/82/33/87/8

29Subtractthe following fractions and represent them in the lowest terms.

- a) 7/11-2/11
- b) 8/9-1/3
- c) 9/10-2/4

2Represent the following repeated addition by a multiplication of a fraction.

- a)  $\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$
- b) 2/3 + 2/3 + 2/3

9

Use a tree diagram to show the possible combinations when rolling a 6-sided die and flipping a coin.

16

Solve: 8 x 1/8

8 ÷ 7/8

23Describe how the relationship between the number of faces of a prism and the angles between the faces of a prism (e.g., does increasing the number of faces increase or decrease the angles between the faces?)

30 If I took my Kleenex box and slid it across my desk, would this be considered a translation, a reflection, or a rotation?

3 When multiplying and dividing integers, and the signs are either both positive or both negative, what will the result/answer always be?

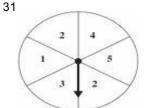
10

Find two fractions that have a sum of 2.

17

Are all outcomes of rolling a 6-sided die lablelled 1 to 6 equally likely? Explain?

24 The temperature at noon was 7°C. Over the next 7 hours, the temperature rose 2°,rose 4°C, dropped 1°,and then dropped 3°C. What was the temperature at 17:00?



4 Multiply the following fractions and represent them in the lowest terms.

- a) 1/3x2/6
- b) 25x3/5
- c) 4/6x3/4

11

Sally ate ½ of the pizza on Friday night, and 1/6 of the pizza Saturday morning. How much pizza is left?

18Divide the following fractions.

- a)  $4 \div 2/8$
- b) 5 ÷ 15/1
- c)  $3 \div 9/3$

25

How would you write the following as a multiplication sentence?  $\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$ ?

#### June - Grade 7 Math

ThreeDay Question: The following statistics were available prior to playoffs of the local PeeWee hockey league. Team 'Generals' are at 16 wins and 4 losses, Team 'Huskies' are at 7 wins, 4 ties, and 9 losses Team 'Wolverines' are at 8 wins, 5 ties, and 7 losses, and Team 'Skaters' are at 15 wins, 2 ties, and 2 losses.

What is the difference between theoretical probability and experimental probability?

Monday

- What are the coordinates of the origin on the Cartesian Plane?
  Why is this the case?
- 18 Write two equivalent fractions for the following:
- 25 Georgie's batting average is .200. This means that she has gotten a hit 20% of the times she has been at bat.
  a) What is the probability of Georgie getting a hit next atbat?
- b) What is the probability of Georgie not getting a hit on her next at-bat?

- 5
  What is the difference between frequency and relative frequency?
- When a lottery states the chances of winning, are they using theoretical probability or experimental probability?
- Sketch a right prism that has a height of 3 cm and a base that is 2cm x 4 cm.
- 26 Su Li charges \$14 to shovel one driveway. She earned \$112 in February.
  a) Model this situation using an equation.
- b) Solve your equation to find out how many driveways Su Li shovels in February.

- a) Which team is most likely to win theplayoffs if they continue to play like they did during the season. Explain your reasoning.
- Order the following from least to greatest:
- 3/8, 1/4, 5/8, 2, 1/2, 7/8
- 13 Kim spent 12 hours at her friends, out of that time 1/2 was spent outside, 1/3 was spent watching TV, the remainder of time was spent napping. How long (in hours) was her nap?
- 20 Chose two of the following digits to make the statement true: 1,2,3,4,5

27 Solve: 0.5 x 2 **0.5** ÷ 2

- b)Which team is most likely to give them a tough competition?
- c) Which team is least likely to give them a tough competition?
- 7
  How would you write the following as an addition sentence?

$$\frac{1}{2} \times 4$$

- ther was Solve:

  ont of  $9 \times \frac{2}{3}$ ow  $9 \div \frac{2}{3}$ 
  - When the ball is swung around the pole in tether ball, is this considered a translation, a reflection, or a rotation?
  - 28 29

- If a shirt costs \$25, how much will two shirts cost me? What if I were buying 6 shirts? Show your answer using an algebraic equation.
- $^{8}$  Draw a diagram to show how  $^{1\!\!/_{\!\!2}}$  X  $^{4}$  and
- $4 \times \frac{1}{2}$  are different.
- Solve each equation. Verify your solution.
  - a) x + 4.9 = 20
  - b) 5.7 = b + 3.7
- Think about the Cartesian Plane and its four quadrants (I,II, III, IV).
- Which Quadrant will each of the following sets of points be located in?
- a) (+2, +7)
- b) (-3, +8)
- c) (+7, -6)