

SEPTEMBER - GRADE SIX

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Create a number sentence that includes any operation and equals 1456.	Create a growing pattern and indicate the pattern rule. Ask someone to guess your rule.	Explain what congruent means.	There are 3 girls for every 5 boys in a math class. If there are 32 students, how many of them are girls?	A library charges \$0.05 for every day a book is overdue. If Mary was charged \$2.75, how many days overdue was her book?
Bank 1 charges \$4.50 a month plus \$0.25 a cheque. Bank 2 charges \$0.50 per cheque. Why pick Bank 1?	Ask another member of your family to add 8494 and 5637. Compare methods.	The mean of 5 numbers is 24. Four of the numbers are below, what is the value of the missing number?	Explain why these expressions are equal: 5 x 600; 50 x 60; 500 x 6; 5000 x 0.6	Use a calculator. Multiply decimal numbers by 10, 100, 1000, and 10 000. Look for patterns. Explain the patterns to someone.
Mike runs 3 laps for every 4 laps that John runs. If John runs 12 laps, how many laps has Mike run?	5 cans of green beans cost \$4.75. If each can is the same cost, how much will 6 cans of green beans cost?	Which CD club plan is better... \$10 per CD, or first 2 CDs free, and \$12 per CD after that? Why?	The Wilson family is traveling at a rate of 90 kilometers per hour. At this rate, how long will it take them to travel 720 kilometers?	What is a repeating pattern? Create repeating patterns to illustrate your repeating pattern ideas.
Solve the equation below: $2x + 5 = 43$	How much money do you think you would need to treat your entire family to a meal at Wendy's?	How would you add 9789 and 8516 without the use of a calculator or a pencil?	It takes $\frac{3}{4}$ cups of chocolate chips to make 24 cookies. How many cups of chocolate chips would be needed to make 8 cookies?	If 40% of a number is 16, what is 60% of a number?

OCTOBER - GRADE SIX

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Conduct a survey. Organize your findings in a graph and share your results with someone.	Complete the pattern. What will the next 3 terms be? 7, 21, 63, 189 . . .	Tommy had a 28.5 cm piece of string. He wants to cut it into 5.5 cm pieces. How many pieces will he be able to get?	Create a number sentence that uses addition and subtraction and is equal to 7046.	If you had \$20.00 to spend on snacks, what could you buy with it?
Compare 7568 and 6758. What do you notice?	Simplify: $\frac{6(3+5)}{4}$	A rocket faces south at 9:00 a.m. It makes one clockwise turn each hour. Which way will it face at 6:45 p.m.?(A chart helps!)	Will keeping track of a team's win-loss record help you predict their future wins and losses? Explain.	On what day of the week were you born? Explain how you solved this problem.
Can you make a rule that would work for finding anyone's birth date?	How many times do you have to subtract .20 from 10.0 to get to zero?	Put these numbers in order from smallest to largest. 2.4 2.38 2.043 2.310 2.46	Is 4.09 closer to 4 or to 5? Is it closer to 4.1 or 4.0? Tell how you know.	Your faucet drips once every 6 seconds. How could you determine how much water is wasted in a day?
What is the greatest common factor of the numbers 24 & 36?	A cookie recipe calls for 36ml of butter for 12 cookies. To make 60 cookies, how much butter will you need?	How many times do you have to subtract 50 from 1000 to get zero?	How many boxes hold 100 000 sheets of paper, if one box holds 8 packages, and one package contains 500 sheets of paper?	Janie estimates that \$401.29 plus \$27.00 is approximately \$430.00. Is her estimation reasonable? Explain.

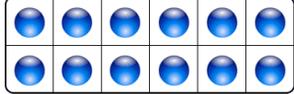
NOVEMBER - GRADE SIX

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY										
<p>Moira used a calculator to add 17.45 and 12.39. What was her answer?</p>	<p>What information does this graph give?</p> <p>Graph of Results</p> <table border="1"> <caption>Data for Graph of Results</caption> <thead> <tr> <th>Fruit</th> <th>Fraction of fruit covered by mold</th> </tr> </thead> <tbody> <tr> <td>Orange</td> <td>0.9</td> </tr> <tr> <td>Kiwi</td> <td>0.6</td> </tr> <tr> <td>Banana</td> <td>0.1</td> </tr> <tr> <td>Apple</td> <td>0.3</td> </tr> </tbody> </table>	Fruit	Fraction of fruit covered by mold	Orange	0.9	Kiwi	0.6	Banana	0.1	Apple	0.3	<p>You have 2 wooden planks that are each 180 cm long. How many shelves can you make from them if each shelf needs to be 75cm long?</p>	<p>Count forward by hundredths. How far can you count? Explain</p>	<p>Pick a four-digit number less than 5000. To make 5000, what would the other part be (e.g., for 3335, the other part is 1665)?</p>
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<p>What error was made solving this question? $246 + 127 = 3613$ What is the correct answer?</p>	<p>Name a decimal number between 7.4 and 7.5. Is your number closer to 7.4 or 7.5? Tell how you know.</p>	<p>Write the following number in written words: 1 467 980</p>	<p>You have saved \$135. Each week you save \$14 more. How long will it take you to save at least \$158?</p>	<p>Is the number 3.51 closer to 3, 4 or 5? Explain.</p>										
<p>Find two 4 digit numbers with a difference where the ones digit is 4.</p>	<p>Find the area of the following rectangle:</p>	<p>How are the numbers 50, 500, 5000 and 50000 the same, and how are they different?</p>	<p>Find the perimeter of the following rectangle:</p>	<p>Use the digits 2, 9, 6, 4 to create as many numbers as you can whose value is between 3000 and 8000.</p>										
<p>Start with 100 and create a number pattern using subtraction. Have someone guess your pattern rule.</p>	<p>If a dozen donuts cost \$6.50, what is the cost of 4 dozen?</p>	<p>Five teams are to play in a tournament. Each team plays every other team once. How many games will there be?</p>	<p>Take turns rolling a number cube. Multiply the number you get by 1, 10, 100, or 1000. The first running total closest to 10 000 wins.</p>	<p>What error was made solving this question? $362 = 726 - 488$ Correct the equation to make it true.</p>										

DECEMBER - GRADE SIX

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Which is better: 7 days work for \$20 a day, or \$2 the first day and doubled wage every day after? Why?	If you bought a hat for \$6, sold it for \$7, bought it back for \$8, and then sold it again for \$9, what would your profit be?	Use the same digits as yesterday, but include a decimal with each number you create. How does this change your results?	Measure the length of a family member's foot. Find some other items in your home that have the same measurements.	If you had to conduct a survey to determine if your family was getting enough sleep to stay healthy, what questions might you ask?
Write 3 different multiplication expressions that equal 1400. Represent each with a drawing.	Draw a number line from 3.7 - 9.5. Record the location of three terms that are within that range.	Think of a shape. Play 20 questions with a partner to identify the shape you selected. Switch roles.	If you calculated your age in months, how many months old are you? How do you know?	If John were 6.5 cm taller, he would be twice as tall as Stu. If Stu is 65.25 cm tall, how tall is John?
Draw the following fraction: $\frac{2}{5}$	Why might you choose to display survey information in a graph instead of recording the information in a different way?	If your cousins were 5, 9, and 10 years old, what would their mean age be?	Does repeating a probability experiment help you draw better conclusions about the results? Explain.	Pick a single-digit number. How many times can you double it before reaching 10 000?
How many decades old is Canada?	Find items which contain triangular shapes. How are the triangles alike and different?	Pick a number between .50 and 1.00 and complete: .50 and _____ makes my number.	True or false: Any multiplication equation can be shown as a rectangle. Explain.	$\frac{3}{4}$ List 4 equivalent fractions.

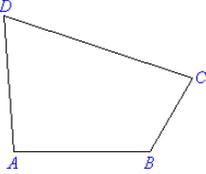
JANUARY - GRADE SIX

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
<p>What is the missing number in the equation below...</p> $5 \times \underline{\quad} = 70$	<p>Create a shrinking number pattern. Challenge someone to guess your pattern rule.</p>	<p>Find two 3 digit numbers with a difference greater than 38.</p>	<p>Round 9 981 to the nearest ten, hundred, thousand. What do you notice?</p>	<p>Write a multiplication sentence to represent the following array:</p> 
<p>Alex is doing a science project on swimming pools. What is the best unit of measure to use?</p>	<p>Look at the buildings on your street. Where do you see 90 degree angles?</p>	<p>Create a repeating number pattern which includes multiplication.</p>	<p>Explain what happens to a decimal number when you multiply it by 10, 100, 1000, 10 000? Why is this?</p>	<p>Create your own pattern using the letters of the alphabet. Write a rule for your pattern.</p>
<p>9 km 2 m = _____ m</p>	<p>Find examples of obtuse angles in your home. Record your findings.</p>	<p>If someone drove 56 km for work each day, how many km would s/he drive in one month?</p>	<p>Giant kelp can grow up to 6dm a day. How many metres can it grow in 4 weeks?</p>	<p>What happens to a decimal number when you multiply it by 10 000? Explain why this occurs.</p>
<p>A rectangle has an area of 18 cm squared and a length of 6 cm. How can you find its width?</p>	<p>Show at least two different ways to solve this equation:</p> $35 \times 41 = ?$	<p>What happens to a decimal number when you multiply it by 10? When would knowing this be useful?</p>	<p>Change the amount to a decimal in the larger unit.</p> $\$7 \text{ and } \$0.03 = \underline{\quad}$	<p>Which type of angle (straight, acute, obtuse), did you find most often? Why is this?</p>

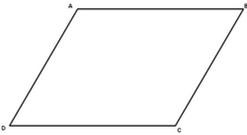
FEBRUARY - GRADE SIX

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
<p>Mark parallel line segments in the following letters:</p> <p>E H</p>	<p>Find objects in your home that are prisms. How do you know they're prisms?</p>	<p>You want to frame a 25 x30 cm picture. What length of framing will you need to buy? Explain.</p>	<p>Pick a two-digit number. Double it and add one. How many times can you do this before you reach 1000?</p>	<p>If you were to write counting numbers in rows of seven, on which row would 100 land?</p>
<p>If you were to write counting numbers in rows of six, in which column would 100 fall?</p>	<p>Create a number pattern using addition and division. Have someone else guess your patterning rule.</p>	<p>Use a calculator to multiply 142 857 by the numbers 2 through 9. Can you find something noticeable about each answer?</p>	<p>Carpeting costs \$10/M. About how much will it cost for carpet your room?</p>	<p>Start with 100. Create a number pattern using subtraction and multiplication. Have someone guess your patterning rule.</p>
<p>Ben wants to find all the ways he can make \$0.60 using quarters and nickels. He lists the number of quarters in increasing order. Why did he stop at 2 quarters?</p>	<p>You do not have a protractor. How can you figure out if an angle is acute or obtuse?</p>	<p>How many squares are there in the border of a 10 x 10 grid? Explain your reasoning.</p>	<p>Use the numbers 7, 9, and 1.5, to create a mathematical story that makes sense.</p>	<p>Draw free hand sketches of a right angled triangle and an acute angled triangle.</p>
<p>15 people in a room shake hands with every other person in the room. How many handshakes is that?</p>	<p>Explain how you would change a measurement from cm to m.</p>	<p>Explain why you might need to convert km to m, or vice versa.</p>	<p>Write the numbers 1 through 30 on slips of paper. Sort them into three groups. Name your sorting rule.</p>	<p>If it is 6 degrees at breakfast, with an expected high of 22 C, will you need to wear a coat to school? Explain.</p>

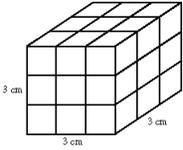
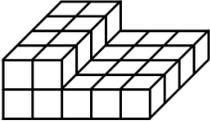
MARCH - GRADE SIX

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Find all the ways you can make \$0.35 with dimes and nickels.	List all the factors of 30 and 45. Circle the common factors.	Solve: 456×987	I am a quadrilateral with two pairs of parallel sides. I am a ?	Find as many ways as you can to write 12 as a sum. Explain your strategy.
$47 \times 23 = 981$ Without calculating, tell why the answer to this question is or is not reasonable.	$48 \times 23 = ?$ Solve. Prove that your answer is correct using division.	 <p>Name the types of angles in the polygon above.</p>	How could you figure out how much water you'd need to fill a pool if you did not have the pool's dimensions?	A palindrome is a number that reads the same way forward and backward. Write 5 three-digit palindromes.
Explain when it would be useful to know a perimeter measurement.	Name 5 fractions equivalent to $\frac{1}{2}$. What patterns do you see?	$70 \times 80 = 50 \times 80 + 20 \times 80$ Follow the pattern to write 5 of your own equations	How many seconds are there in 24 hours? How many minutes?	What is the mean temperature for the week in degrees Celsius?
Select 3 numbers to add. What problem might lead you to have to add those numbers?	Pick a number, double it, add 6, double it again, subtract 4, divide it by 4, and subtract 2. What is the number you get?	Look back over yesterday's problem. Try to explain how that works.	Think of a 3D solid. Play 20 questions with a partner to identify the solid you selected.	Pick a two-digit number. What would the other part be to make 500? For example, if you pick 235, the other part would be 265.

APRIL - GRADE SIX

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
<p>$20 \times 5 = 2 \times (10 \times 5)$ How does this multiplication strategy work?</p>	<p>If $\frac{1}{3}$ of all homes have a pet dog, then 20 out of ___ homes will have a dog.</p>	<p>How many sides? How many vertices?</p> 	<p>Calvin used his allowance to purchase a new video game. His allowance was \$12.00. The video game cost him \$5.67. How much money did he have left?</p>	<p>How many sides do three quadrilaterals and five pentagons have altogether? How did you find your answer?</p>
<p>Use what you know about numerators and denominators to order these fractions: $\frac{1}{2}$, $\frac{8}{10}$, $\frac{3}{4}$, $\frac{2}{5}$, $\frac{11}{20}$</p>	<p>You have nine Smarties. 3 are red. Name 2 fractions that tell what portion of the Smarties is red.</p>	<p>$200 \times 17 = 2 \times (100 \times 17)$. Why might you use this multiplication strategy? How does it work?</p>	<p>Do you think $\frac{2}{5}$, $\frac{4}{10}$, and 40% can equal the same quantity? Why or why not?</p>	<p>True or false: 3 apples to 5 plums is the same ratio as 6 apples to 10 plums? Explain how you know.</p>
<p>30 people represent half of the audience. How large is the audience?</p>	<p>Draw a rectangle. If the rectangle you drew is $\frac{3}{4}$ of the whole, draw the whole.</p>	<p>Look in your cupboard. Record all the different units of measure you can find. What do you notice?</p>	<p>Convert 8.3 metres to centimetres. Explain how to do this.</p>	<p>Think of a 3D solid. Play 20 questions with a partner to identify the 3D solid you selected.</p>
<p>Is $\frac{2}{5}$ of a metre the same thing as $\frac{1}{2}$ of a metre? Explain.</p>	<p>If you are baking, what unit of measure would you use to measure flour? Why?</p>	<p>Finish this statement: $\frac{4}{5}$ is greater than $\frac{4}{9}$ because. . .</p>	<p>If it is 22:00 hours on a 24-hour clock, what time is it on a 12-hour clock?</p>	<p>Which of the following fractions does not belong in the set? Explain. $\frac{5}{2}$, $\frac{1}{2}$, $\frac{2}{2}$, $\frac{2}{4}$</p>

MAY - GRADE SIX

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Write and solve your own division story.	Subtract: 1570 - 1043	$16 \times 25 = 8 \times 50$ Does this multiplication strategy work? Explain.	If both shapes have a perimeter of 16 units, which has a greater area: a long rectangle or a square?	Give 5 real world examples of situations when you would need to measure time to the nearest second.
You need to triple your pancake recipe. If a single serving is $\frac{3}{4}$ cup, how much will you need?	How are a number line and a ruler the same and different?	If the train departs Toronto at 11:30 a.m. and arrives in Montreal at 4:56 p.m, how long will you be on the train?	How does comparing a fraction to 0, $\frac{1}{2}$, or 1 help determine its value?	Pick a number, double it, add 6, double it again, subtract 4, divide by 4, and subtract 2. Explain how this works.
Show how you would prove that $\frac{1}{8}$ is closer to 0 than $\frac{1}{2}$.	Record the difference in temperature from morning to evening in degrees Celsius.	Write 10 equations. Use 4 operations in each (addition, subtraction, multiplication, division).	What time will it be in 2000 minutes from now?	Create and solve an equation that requires you to add, subtract, multiply, and divide.
 <p>Write the volume of the object.</p>	My answer is 8. What is my question?	The mean of a set of numbers is 15. What are the possible numbers?	 <p>Write the volume of the object.</p>	Fill in the parts with numbers to make a true statement. $A\% \text{ of } B = C$

JUNE - GRADE SIX

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
<p>$\frac{2}{3}$ of the students in a class prefer apples to oranges. How many students might be in the class? Explain.</p>	<p>Ray's class has 24 students. There are fewer girls than boys. How many girls might there be? Give 3 possibilities.</p>	<p>A theater sells 20 tickets for \$25. Should 30 tickets cost more or less than \$35. Why or why not?</p>	<p>$\frac{2}{3}$ of a number is 24. What is the number?</p>	<p>Write down a favourite number. Write 10 things about it.</p>
<p>Tell everything you can about the number 88.</p>	<p>Choose 3 numbers to add. What problem might lead you to need to add those numbers?</p>	<p>You cannot use any digit more than once. Form the greatest number you can that is a multiple of 5.</p>	<p>How many zeros in one Trillion?</p>	<p>Hearts beat about 72 times a minute. How long would it take a heart to beat 1 000 000 times?</p>
<p>Think of a number. Make up clues so someone else could guess your number.</p>	<p>The answer is 49. Use 2 or more operations to create a question.</p>	<p>Show how 2 different rectangles with the same perimeter can have different areas.</p>	<p>How many times can you roll a pair of number cubes without rolling a double?</p>	<p>In your opinion, what are some advantages and disadvantages of using a 24-hour clock?</p>
<p>If you toss a coin 6 times or 100 times, will the probability of the coin landing tails change? Explain your reasoning.</p>	<p>In a probability experiment, do you think the number of trials changes the outcome? Tell why you think this.</p>	<p>Create a picture entirely from triangles.</p>	<p>What unit of measure would you use to estimate the perimeter of your room, a dog pen, school yard, park?</p>	<p>What have you loved most about Math this year?</p>