Home Learning Activities: Week 4

Grade 7M – Mr. Methot

*This week we are continuing with **percents (pourcentages)** and finding the percents of numbers. There a few different strategies to find the percent of a number. I have included some examples in the attached file named "**Pourcentages**". I would recommend looking at this file first thing.

Here are a few links to videos in French that you can watch that provide good examples of calculating percents of prices when buying stuff on sale, that even include sales tax.

https://www.youtube.com/watch?v=xW4ahfE8qqk&list=PLrt_BPqnOBnPKc6NSwBnt EeLzcHmmL9jL&index=18

https://www.youtube.com/watch?v=dQI02IhsH-I&list=PLrt_BPqnOBnPKc6NSwBntEeLzcHmmL9jL&index=17

https://www.youtube.com/watch?v=z3iuef_56eM&list=PLrt_BPqnOBnPKc6NSwBnt EeLzcHmmL9jL&index=2

Here is a link that provides some lessons in English on percents as reinforcement. There are videos to watch and practice questions to try if you want. I would suggest checking out lessons #3 and #9.   https://courseware.cemc.uwaterloo.ca/27?gid=75

*This week we will also begin transitioning into **probability (probabilité)**. Think back to grade 6 and comparing the difference between **theoretical probability (probabilité théorique)** and **experimental probability (probabilité expérimentale)**. Theoretical probability is the likelihood of a favourable outcome when considering all the possible outcomes, when all possible outcomes are equally likely. It is what should happen. Experimental probability is the frequency of a particular outcome compared to the total number of trials of an experiment. Probability can be expressed as fractions and percents.

A common item used in probability is a coin, which has 2 possible outcomes. The theoretical probability of flipping a coin and the outcome being 'heads' is 1/2 = 50%.

The theoretical probability of flipping a coin and the outcome being 'tails' is also 1/2 = 50%. Now looking at the experimental probability, let's say we flip the coin 100 times. Maybe the coin lands on 'heads' 46 times and on 'tails' 54 times. This means the experimental probability for 'heads' is 46/100 = 46%, and the experimental probability for 'tails' is 54/100 = 54%. In this case, the experimental probability of each outcome does not quite match up with their theoretical probability. According to the theoretical probability for each outcome when flipping a coin, it should be 50%, which would be 50/100 for both 'heads' and 'tails'.

I have included a probability video in the Extras section that you can check out as well!

Monday

- **Brainpop:** There are lots of great educational videos and quizzes you can try on www.fr.brainpop.com. Feel free to explore the website as much as you want. You can use my account to gain access. Click on "se connecter" to log in. The username is Mr.Methot and the password is Raiders2020. Check out the subject "Sciences de la Terre" at the top of the homepage. Then on the next page click on "Sujets". Find the topic called "Volcans". There is a video you can watch and quiz questions you can try.

- **Netmath questions:** Continue with the activities/lessons on www.netmath.ca. If you haven't yet activated your account, the steps on how to do so can be found in last week's document. I have added three new lessons for you to try this week, along with any older lessons that you have not completed yet. Here are the new lessons that I've added to your homepage, and this is the ideal order you should complete them in:

  1. **Explorer la notation décimale et la notation de pourcentage**
  2. **Résoudre des problèmes de pourcentage 1**
  3. **Comparer la probabilité théorique ou expérimentale**

  Bonus: Les défis de Sonya (1)

Tuesday

- **Puzzles + cards:** Here are a couple of new ones to try. You can always go back and revisit puzzles and card games from previous weeks that you enjoyed or want to complete.

  1. **Logic puzzle:** Using the clues provided, the challenge is to figure out which colour of pants, shirt, phone, and crayon go together for each of the 4 kids. The puzzle is in the file named "**Casse-tête de logique**". You can share your answers on Teams with the class!

     Here is website that provides some help and tips on how to solve a logic puzzle: https://logic.puzzlebaron.com/how-to-solve-a-logic-puzzle.php

     If you really enjoyed this logic puzzle, there is a free app you can download called "Logic Puzzles in French". There are also free apps available for Kakuro and Sudoku if you are a fan of those!

  2. **Percents card game:** You will need a deck of cards, some paper and a pencil, and at least one partner to play along with you. You can use all the cards in the deck for this game. Give cards the following values: jack = 11, queen = 12, king = 13, joker = 14, ace = 15. Shuffle the deck and place the deck face down on the playing surface. Choose a percent to focus on for the game. For example, let's say you go with 25%. For each round, one player will turn over the top card of the deck to reveal a number from 2-15. The object of the game is to be the first player to correctly identify the percent of the number you turned over. So maybe you turn over a queen, which has a value of 12. To earn a point, you want to be the first player to figure out 25% of 12, which is 3. Sometimes the answer will be a decimal or a fraction. It is up to you how many points you need to win a game. One option is that the winner of each round can just keep the card, and the game can be over once every card in the deck has been played. I would suggest playing a few games, working with a different percent each game.

For an extra challenge, you can turn over two cards each round and either add them or multiply both numbers together. Then to earn a point, you need to find the percent of the larger number after you've added or multiplied. For example, if you turn over an 8 and a 4, and decide to multiply them together, you now need to quickly find a certain percent of 32.

Wednesday

- **STEAM challenge:** Your challenge this week is to find some items around your house that are broken or no longer being used and create something new! This is called <u>upcycling</u>. There is some information and a link to a video included in the attached file named "**Défi de STEAM semaine 4**". I have included the English version of the document as well with the name "**STEAM challenge week 4**". Be sure to use the third page for grades 6-8. I'd love to see your upcycling creations so feel free to share on Teams with the class!

- **Numeracy activity:** We know that the amount of garbage and waste that we are throwing away as humans is too high. This is why we now have recycling programs put in place in NB, such as the 'Green Team' at school, to reduce the amount of waste being dumped in landfills each year. Just how much waste went to landfills in 2012, let's do the math to find out! Here's a hint, you will need to convert from kg to tons to find the exact answer. This question is included in the same files as above.

Thursday

- **Netmath questions:** Continue with wherever you left off. If you happened to have completed all the activities/lessons that I've given you so far, then you can explore the website and find a new topic that interests you to try. Click on "Livres" on the left-hand side of the screen to find all the different math topics.

Friday

- <u>**Probability experiment**</u>: This should be an activity to review concepts from grade 6. Think about the **theoretical probabilities (probabilités théoriques)** of each possible outcome of an event such as flipping a coin, rolling a dice, choosing a suit from a deck of cards, or another event of chance where all outcomes are equally likely.

  Choose an event to perform several experimental trials of to find the **experimental probabilities (probabilités expérimentales)** of each possible outcome. I would suggest performing 50, or even 100 hundred trials, and keeping note of the outcome of each trial. After you have finished your experiment, compare the experimental probability of each possible outcome to the theoretical probability of each possible outcome. Are they equal? In theory they should be, but likely they aren't. If they aren't equal, how close are they? You can repeat the experiment a second time with more trials, to see how the experimental probabilities are different than they were before. Are they closer to the theoretical probabilities for each outcome the second time you performed the experiment compared to the first time? You are welcome to share your results on Teams with the class and let everyone know the event you chose for your trials.

  If you really want to extend your learning, try another experiment with a totally different event. In other words, if you flipped a coin earlier, try another experiment by rolling a dice, or some other probability event that you can think of.

Extras

- <u>**Research question of the week:**</u> Continuing forward with the topics of earthquakes and volcanoes/volcanic eruptions. Now let's consider in what parts of the world these catastrophic events occur. **Do we experience earthquakes or volcanoes/volcanic eruptions in our region/area of the world? Where in the world are disasters related to earthquakes most frequent? What about volcanoes?** We can discuss this question on Teams later in the week!

- **Math problem of the week:** Each week I will give you a challenging math problem to try created by the University of Waterloo, good luck!
https://www.cemc.uwaterloo.ca/resources/potw/2019-20/French/POTWB-19-GS-28-P-f.pdf

- **Probability:** Here is a video that shows some examples of theoretical probability using dice and a colour wheel. Enjoy!
https://www.youtube.com/watch?v=5cDG30nlNN0

Talk to you all Thursday @ 2pm!

Disney Themed Kahoot Game!

https://twitter.com/gerritbosma9   https://www.partycity.com/ca/mickey-mouse-life-size-cardboard-cutout-294138.html