Mrs. H. Blakely-Doucette’s Math Grades 6 & 7

I hope you all enjoyed the weekend and are looking forward to this last week of learning opportunities! 😊 Here are the math opportunities for the week of**, June 8th to June 12th. \*\* I am adding more choices to this list as weeks go on. So, you can select different learning opportunities and possibly revisit some you’ve previously completed to improve and/or change. \*\* All the newest opportunities are towards the end of this list.**

I am encouraging you to do “Relfex” for 20 minutes a day **or** make up basic multiplication flash cards and practice using them. \*\*You could make up some division flash cards too.\*\*😊

 **And** **complete 2 of these other activities of your choice:**

1. Mathletics activities (You have some activities assigned) \*\* You goal is to achieve 70% on all your activities. \*\*Keep in mind that there are online tutorials available if you are having any trouble
2. -Morning exercises: Choose 3 or more exercises that you can count out (Ex: pushups, toe touches, running laps in a set time; planking for a set time. crunches, leg lifts, etc…)

-Using the inside of a box (crackers, cereal, or some form of a recycling cardboard, etc…) Keep a tally of each exercise and at the end of the week construct a graph of your choice showing Week One’s Progress. (If you pick this one you can build on it from week to week😊)

1. Engage in a board games and/or card games. (ex: Crazy-8’s; Go Fish; War; Crib; Monopoly; Chess; Battleship; Checkers……)
2. Now maybe you have been assigned *chores* around the house. No problem they could be your form of exercise! (Vacuuming, sweeping, dusting, washing windows, laundry, shoveling etc….) Now, because doing a good job is the key to any house work, yes time yourself and when finished that job get someone (parent or guardian) to inspect and rate your work from 1-5 (1=poorest 5=best) and tally up your time and evaluations. Graph it and compare the weeks work.
3. MATH ART: Create a tessellation. A tessellation (or tiling) is when we cover a surface with a pattern of flat shapes so that there are no overlaps or gaps. (You can also check: **https://tinyurl.com/designtessell -ation \*\***Look for examples around the house. It could be wallpaper, backsplash tiles, flooring or designs on clothing. \*\* Have fun Making your own!
4. Design and develop fraction flash cards, one card has a picture and the other has the numerical value of the fraction. Show some proper fractions, improper fractions and mixed numbers, then turn it into a matching game.
5. You oversee meals for the week. Using the weekly flyers and using a budget of $100.00 to $200.00 plan one week’s worth of meals and snacks for your home. You can cut out your choices or list them. Make some comparison prices from different stores. If you do not have fliers then you can use info off the computer for local stores.
6. **Budgeting Activity:**

**-What is a Budget?**

***-A budget shows the amount money you make (Income) and the amount of money you spend (Expenses) over a set amount of time (day; week; month; year(s)).***

***-A budget is an activity of balancing income (totaling money coming in) vs expenses (money going out).***

**-Why do a budget?**

***It helps you to realize and plan. It helps you get a bigger picture of your money in and out. It is a method of controlling what and how you spend your money on things need/want/do.***

**Terms:**

1. **Income-a source of money in or earned through actions *Example: jobs, allowances, babysitting, selling things***
2. **Expenses-items or services you pay for *Example: bills, wants, needs,***
3. **Balance-this is the total amount of income minus the total amount of expenses (NOTE: *This is a number and it can be Positive (a good thing) or Negative (a not so good thing) or it can be a Zero (depends on the situation)***

**Construct the following charts:**

1. **Fill in some possible sources of income for yourself and determine the amount under each column.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sources of Income (Name it)**  | **Hourly or Daily**  | **Weekly**  | **Monthly**  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| **TOTAL\*****The total is found by summing up (a*dding)* all the amounts.** |  |  |  |

 **\*\*\*\*\*Add on more rows if needed\*\*\*\*\***

 **2) Fill in some possible expenses for yourself and determine the amount under each column.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Expenses (Name it)** | **Hourly Cost or Daily Cost** | **Weekly Cost** | **Monthly Cost** |
|  |  |  |  |
|  |  |  |  |
| **TOTAL\*****The total is found by summing up (a*dding)* all the amounts.** |  |  |  |

 **\*\*\*\*\*Add on more rows if needed\*\*\***

1. **Now take the amounts in the “TOTAL” column from each chart and Balance them.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sources of Income-****TOTALS** | **Subtract****(Difference)** | **Expenses****TOTALS** | **Equals** | **Balance****(Positive, Negative or Zero)** |
| **Daily: \_\_\_\_\_\_\_\_**  | **-** | **Daily: \_\_\_\_\_\_\_** | **=** |  **\_\_\_\_\_\_\_** |
| **Weekly: \_\_\_\_\_\_\_** | **-** | **Weekly: \_\_\_\_\_\_** | **=** |  **\_\_\_\_\_\_\_** |
| **Monthly: \_\_\_\_\_\_\_** | **-** | **Monthly: \_\_\_\_\_\_** | **=** |  **\_\_\_\_\_\_\_** |

 **\*\*\*\*\*\*NOTE: You can also complete a column for “Yearly” (*Annually)*\*\*\*\***

**Information for Analyzing:**

**If your total Balance column is positive then you have *extra money* to save.**

**If your total Balance column is negative then you are *short money* to pay for your expenses. Solutions could be, you need to either get more income or cut back on expenses. (*Look over the wants and needs in your expenses.)***

**If your total Balance column is zerothen you have just enough to pay out for all your expenses. (*In this case you do not have no room for increases in cost for your expenses so, you may want to plan for the possibility for changes.)***

1. **Ratios:**

” A ratio is a way of comparing 2 or more quantities (*amounts*) in a given situation.”

When we think of ***ratios*** we like to think of a quantity or an amount in a container to start off. A perfect example of this is when baking or cooking or simply mixing things up. Let’s make some frozen orange juice, you need 1 can of frozen juice and to that we mix 3 cans of cold water.

 cans of orange juice to cans of cold water

\*To go from 1 to \*So, we need to ***multiply*** the 3 by 5

5, we ***multiplied*** by “5” \* to get the missing number. \*

 1 1 : 3 3

 Now, lets say we want to make enough juice for a party and you bought 5 cans of

juice. How much cold water are you going to need?

?

5

 5 : ?

We need to find a ratio rule: So, in this case of mixing juice, our “base ratio” in our situation is the ratio that has a “one” in either/any of the terms. In our case it is the “one” can of orange juice. So, for every 1 can of orange juice we need 3 cans of cold water. This will help with the 2nd question.

Now let’s use this same idea in other situations:

1. If your mixing some trail mix and you need 3 cups of Cheerios for every 1 bag of M&M’s. How many cups of Cheerios for 4 bags of M&M’s? (Use the above strategy as a guide to help you.)
2. If 1 batch of cookies requires 2 cups of chocolate chips and 1 cup of sugar. How many cups of both are needed to triple the recipe? (Use the same strategy😉)
3. If you can buy 1 bunch of seedless green grapes for $2.00 then, how many bunches can you buy with $18.00?
4. Max bought one container of dried cherries for $7. His Mom gave him $30.00 and told him to get as many containers as he can with the money. How many containers can Max buy? Will he have any money left over? And how much?
5. Drew bought 1 bottle of strawberry jam for $3.00. How much would it cost for 12 bottles of strawberry jam?

-Take a look around your own house and see where you would or could use the concept of ***ratios*** in your everyday situations. Make a list and then apply this idea in different ways.

-Take a recipe for a batch of cookies, look over the ratio of different ingredients. Then use that recipe as your base ratio, then double and/or triple the recipe. List all the new ratios of ingredients.

1. **Solve using Order of Operations “BEDMAS”**: (Brackets, Exponents, Division, Multiplication, Addition, Subtraction) \*\*Remember: do the division & multiplication in order from left to right and the same happens with addition & subtraction.\*\* (/=division)

 Ex: 2x8/4-2+8

 16/4-2+8

**Remember:** Step by step and your answer triangle!

 4-2+8

 2+8

 =6

 1. 5 + 4 x 7 = 2. (5 + 9) x 3 =

 3. 7 + 4 x 2 - 2 = 4. 15 - (4 x 2) + 4 =

5. 32 ÷ (8 x 2) - 2 = 6. 15 - 45 ÷ 9 + 7 x 2 =

7. 100÷ (50 x 2) - 2 = 8. 5 - 15 ÷ 5 + 7 x 3=

9. 3x(24/8+7) – 12+3= 10. 45/9x5-(20-10/2) =

\*NOTE: If you want to give yourself more of a challenge, you can place a decimal into any or all the double digits in the equations and solve.\*

**11)Review of Math Terms:**

**Prime Number**: A whole number greater than 1 that has **only two factors**, **1 and itself**. Examples: 2, 3, 5, 7, 11, 13, 17, and 19 are all prime numbers.

**Composite Number**: A whole number greater than 1 that has **more than two factors**. Example: 8 is a composite number since its factors are 1, 2, 4, 8.

**Factors**: The numbers that we **multiply** are the factors of the product.

**Product**: Is the answer you get when you multiply.

**Sum:** Is answer you get when you add.

**Difference**: Is the answer you get when you subtract.

**Quotient**: Is the answer you get when you divide.

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 Following are Prime or Composite Numbers. List the Factors for each number: (Use the horseshoe method or the rainbow method for the factors.)

1. 30 2) 11 3) 15 4) 24 5) 14 6) 43

7) 100 8) 29 9) 45 10) 33 11) 52 12) 51

13) 63 14) 40 15) 71 16) 27 17) 50 18) 20

19) Product of 5 and 7=\_\_\_\_\_\_\_

20) Difference of 16 and 8=\_\_\_\_\_\_\_

21)Sum of 13 and 12=\_\_\_\_\_\_

22) Quotient of 45 and 9=\_\_\_\_\_\_

23) Take the difference of 19 and 7 and find the product of that and 3 then the quotient of that and 6=\_\_\_\_\_\_\_

24) Sum of 4 and 9 then find the product of that and 2=\_\_\_\_\_\_

25) Difference of 20 and 15 and then the sum of that and the 45 then the product of that and 2=\_\_\_\_\_\_

12) Get in touch with your creative side and write a poem using mathematical terms and numbers. It can be any style you want and have any characters, pictures drawings and or mathematical symbols incorporated into it. (You can send me a pic of your creation (s))

13) Using all your knowledge in Mathematics, create a worksheet. Use at least 5 different topics in Math (Topic examples: decimals, percent, geometry, data collection, integers, fractions, etc.,etc.) Use a variety of question types too. (Type of questions: multiple choice, word problems, short answer, single answer, fill in the blank, graph and questions etc.,etc.) (You can send me a pic or a copy of your work.)

14) **Mathematics in Sewing & Quilting Blocks**

Math is a big part of Sewing and Quilting. The idea of symmetry (one side being the mirror image of the other) is a big part of quilting. Using shapes and lines to design a pattern is the main idea of quilting. Measuring and cutting pieces to the correct size also gives the masterpiece its own creativity and ah when observing it.

 

Using this type of a grid on a full-size piece of square paper design and make you own quilt block. Using a variety of shapes and lines you can develop your block. These are some ideas to start. 

You can add colour and different blocks to make an entire paper pattern for a real cloth quilt. Have fun and be creative! Share your creations if you would like😊

**15)** Using all 2D shapes you are familiar with create an information sheet of facts. Stating all characteristics and common uses for that shape.Be sure to include a labeled sketch of each shape and after the information is complete, compile the shapes into a creative mathematical art piece. Keeping in mind accuracy of lines and precision of angles in the you own design.

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**Keep in mind that these are “work at your own pace” learning opportunities**

**for math. And should you need any assistance or have any questions**

**do not hesitate to contact me. My Email:** **helena.doucette@nbed.nb.ca**

**Stay safe and take care😊!**