Dear Parents,

I hope you had a relaxing, blessed Spring Break and Easter break!

I am continuing to send the email to everyone as we have not heard from all parents concerning Option A or B. ***Once we have heard from all parents, I will begin to send the email only to those who chose Option B.***

Attached are a blank copy of notes with the homework as well as a filled in a copy of notes for the Monday, April 13 lesson. Students can fill in the blank copy of notes as Coach White goes through the problems or students can just follow along the filled-out version of notes (on the link below). ***If you do not have a printer available, just have your student label a blank sheet of paper with the title of the homework (Example: Arithmetic Homework) and write the answers to each problem on this blank sheet of paper.***

Here is the video link of the lesson:

<https://cobbk12org-my.sharepoint.com/:v:/g/personal/john_white_cobbk12_org/EdRIxBW7UetPryMmyzCHGmYB2MpK85G8Kd4HQBGZImG0Dg?e=9pwR99>

The following concept will be covered Monday, April 13:

***Arithmetic Sequence***

* An ***arithmetic sequence*** is a sequence in which the pattern of the sequence is being ***added or subtracted***. In other words, the numbers are close together and the difference (difference means subtract) of the consecutive terms is constant. This constant difference is called the common difference and is denoted by d. If the numbers in the list are increasing, then d will be positive. If the numbers in the list are decreasing, then d will be negative.

                    The nth term of an arithmetic sequence with first term                   C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\83CCE425.tmp and common difference d is given by:

C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\DF714E7B.tmp**=**C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\72026941.tmp**+ d( n – 1 )**

Only plug in numbers for d and the first term in the sequence. In this formula, ***d*** stands for the ***common difference***. To find ***d***, calculate the following: ***second term minus the first term***.

To find a specific term, just plug in the number of the term that is being asked. For example, to find the 20th then plug in 20 for n.

***Steps to writing a rule for the nth term of the arithmetic sequence and finding a specific term:***

1. First, find C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\FEBC3DF7.tmp and d and plug these into the appropriate place in the formula.
2. Then distribute and combine like terms
3. To find a specific term just plug in the number of the term you are looking for

***Example 1***:  7, 4, 1, - 2, - 5, …

D= second number – first number= 4 – 7 = - 3 (d is negative because counting backwards)

                                                                         1 – 4 = - 3

                                                                       -2 – 1 = - 3

                                                                        -5 - - 2= - 3

C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\8FAB121D.tmp**= 7**

C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\E3E2C733.tmp**= 7 + - 3(n – 1)**

**If distribute the – 3, then**C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\188D3AB9.tmp**= 7 + - 3n + 3. Now combine like terms of 7 and 3**

C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\6DE7A62F.tmp**= - 3n + 10**

**If finding the 11th term, then this means n = 11: So, make a substitution (everywhere there is an n, replace it with 11**

**So:**C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\6106FF15.tmp**= 7 + - 3 (11 – 1)**

C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\40FB56EB.tmp**= - 23**

***Recursive Rule:*** C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\59AA3B31.tmp***= 7***

C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\B8781567.tmp***=***C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\DE988B0D.tmp***+ d so***C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\5A9DDDA3.tmp***=***C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\AE9F4AA9.tmp***+ - 3***

***Example 2:*** 4, 6, 8, 10, 12, …

D= second number – first number= 6 – 4 = 2 (d is positive because counting forwards)

                                                                 8 – 6 = 2

                                                                 10 – 8 = 2

                                                                 12 – 10 = 2

C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\A0E6B9F.tmp**= 4**

C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\A6139605.tmp**= 4 + 2(n – 1)**

**If distribute the 2, then**C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\F1093B5B.tmp**= 4 + 2n - 2. Now combine like terms of 4 and -2**

C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\996E4921.tmp**= 2n + 2**

**If finding the 15th term, then this means n = 15: So, make a substitution (everywhere there is an n, replace it with 11**

**So:**C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\E26788D7.tmp**= 4 + 2 (15 – 1)**

C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\EBA7FFFD.tmp**= 32**

***Recursive Rule:*** C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\AC585013.tmp***= 4***

C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\BC551699.tmp***=***C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\98DC4D0F.tmp***+ d so***C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\4981A8F5.tmp***=***C:\Users\KDC10960\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\1801FBCB.tmp***+ 2***

Please do not hesitate to email us with questions or concerns.

Have a blessed evening!

Thanks,

Mrs. Crawford

Sprayberry High School

Special Education Teacher