$$
\begin{aligned}
& \text { KAMSC'8 } \\
& \text { SA } \\
& \text { Steps } \\
& \text { Vatentine'sDay } \\
& \text { Edition } 2020
\end{aligned}
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## Letter From The Editars

Hello 84 Steps readers!
We are so excited to bring you this special Valentine's Day edition of 84 Steps. With the first semester of the year over, it is time to look around and appreciate what and who there is in our lives to love and be grateful for! Whether it's your friends, a special someone, your family, your pets, or all of the above, show someone you're grateful for them this Valentine's Day! No matter what, we here at 84 Steps love you, our readers. Enjoy this edition of 84 Steps!
Love,

Lily Dorstewitz and Shelby Alexander

Juniar Receives Sacial Justice Award
By Sam Rabick

KAMSC would like to congratulate Princess-J'maria Mboup of the KAMSC class of 2021 on receiving the Dr. Lewis Walker Social Justice Youth Award. The Kalamazoo City Commission selected Princess as the recipient of the award in recognition of her dedication to spearheading the KAMSC Multicultural Society, designed to make minority students feel more at home at KAMSC and serve as a forum for socially conscious discussion. KAMSC thanks Princess for her work to make her community better informed and wishes her the best of luck in her continued pursuit of social progress.


## Harrarscapes

By Lily Darstemitz

This Valentine's day, enjoy some quotes carefully and scientifically selected by the stars (or maybe not) for your zodiac sign!

Aries (March $21-\mathcal{A} p r i l$ 19): "The size of your dreams must afways exceed your current capacity to achieve them. If your dreams do not scare you, they are not big enough." - Ellen Johnson Sirleaf (former President of Liberia)


Taurus (April $20-\mathcal{M a y} 20$ ): "For me, I am driven by two main philosophies: know more today about the world than I knew yesterday and lessen the suffering of others. You'd be surprised how far that gets you." - $\mathcal{N e}$ il deGrasse $\mathcal{T}$ yson (Astrophysicist and popularizer of science)
Gemini (May 21 - June 20): "Don't let yesterday take up too much of today" - John Wooden (Gasketball player and head coach at the University of Californía, Los $\mathcal{A}$ ngeles)

Cancer (June 21 -July 22): "There is no way that you can ever really repeat something. I have this great belief that the magic of the moment can never be recaptured." - Brian $\mathcal{M}$ ay (Rock star astrophysicist)
Leo (Jufy $23-\mathcal{A u g u s t} 22$ ): "Take responsibifity of your own happiness, never put it in other people's hands." - Roy $\mathcal{T}$. Bennett (Author of The Light In The Heart)

Vírgo (August 23 -September 22): "The Gest and most Geautiful things in the world cannot be seen or even touched- they must be felt with the heart." - Helen Keller (Author, political activist, Cecturer)

Libra (September 23-Octo6er 22): "For small creatures such as we the vastness is Gearable only through Cove." - Carl Sagan (Astrophysicist and science popu(arizer)

Scorpio (October 23- №vember 21): "Do what is right, not what is easy nor what is popular." - Roy $\mathcal{T}$. Bennett
Sagittarius ( $\mathcal{N}$ ovember 22 - December 21): "The biggest emotion in creation is the fridge to optimism."- Brian May

Capricorn (December 22 - January 19): "Make your life a masterpiece; imagine no limitations on what you can 6e, have or do." - Brian Tracy

Aquarius (January $20-\mathcal{F e}$ bruary 18): "Great things don't come from comfort zones." Roy $\mathcal{T}$. Bennett
Písces (February 19-March 20): "Do not go where the path may fead, go instead where there is no path and leave a trail." - Ralph Waldo Emerson


## Heard Around RAMSC

## By Genevieve Kim

We've probably all heard our fair share of odd things at $\mathcal{K A \mathcal { A } S C}$. To be fair, we've probably heard some equally odd things at our other high schools. These are a few of the gems I've heard in the past few weeks. I'm sure many of you will Ge able to add many more funny or relatable quotes you've personally heard around $\mathcal{K} \mathcal{A} \mathcal{M S C}$, but here are some to start off your colfection.
"I don't want to start studying Gecause if I start studying I'Cl start crying." - Enough said.
"One more day of finals until we do it all over again" - This cheery thought really brightened my day. I really needed that. Thanks.
"The $\mathcal{P}$ word" - M $r$ s. Chap should be proud of the impact she's making. The gth grader I heard saying this refused to say the word.
"A $\mathcal{A}$ I've been studying is math"
" $\mathcal{A l l}$ I've been studying is $\mathcal{N e t f l i x " ~ - ~ I ~ w i l l ~ a f w a y s ~}$ absolutefy LOVE this quote.
"You know it's $\mathcal{K} \mathcal{A} \mathcal{M S C}$ when textbooks are in the halfway for people to take and people $\mathcal{D O}$ take them" - It's true.

"Close only counts in horseshoes and hand grenades. And perhaps curling, and nuclear warfare." - Close doesn't count in math $\sim \mathcal{M} r$. Mílka
"Allrrrrrrrrrrrrrrrightydighty" $\sim \mathcal{M} r$. Cardwell - Just thinking about this makes me feel nostalgic.
"If there's no "I" in communism, wouldn't it be commun-our-sm??" - I have no explanation.

I Ceft all of the quotes from students anonymous on purpose just to make sure no one who said I could use their quote changed their mind later and didn't want the entire school to know who said each specific phrase. I think these quotes embodied a lot of common sentiments among $\mathcal{K A M S C}$ students throughout the grades. If nothing else, I hope you enjoyed reading them!


## A Student Senate Update

By Liy Dorstenity



## ~ Fod Drive Recap ~

The Student Senate would like to thank the KAMSC student body for their contributions to this year's food drive! The total amount of donated food items was a record high this year. Anyone who saw the commons at the end of the drive knows that the bins were more than overfilling with food. Thank you all for your

## generosity!

## -Spring Dance -

On Saturday March $7^{\text {th }}$, from 8 pm to 11 pm , the Student Senate will host KAMSC's spring dance! The theme is 'Masquerade.' (I can't speak for the other seniors, but I'm feeling a little sentimental - This is our last KAMSC dance!) Please come make it another great one at the final dance of the school year!


## - Sci-Fi Film Fest -

Friday and Saturday, March 13~14 ${ }^{\text {th }}$ : Those brave enough to join Mr. Sinclair on a harrowing journey through some of time's most painful science fiction film endeavors will have the opportunity to laugh at the scientific inaccuracies of movies and cry at painful plotlines. Trust me, the suffering makes the one good movie at the end all the sweeter. Those who make it through will receive a sci fi film fest pin as their personal badge of honor.

Questions, comments, or concerns? Join the remind to stay informed and contact your Student Senate Board: Text @kamscstu to 81010 or email kamscstu@mail.remind.com.

## The 84 Steps Comics Section

## By Amua Buck


off the mark.com by Mark Parisi


xkcd
FLOWERS SEEM
SO...RTIE.
SOMETHING
HOMEMADE?
EASY TO COK
HALFHERRIED.

FORTY PRESENTS. No, NOWE! No, GVE HER FIVE TTEMS AND THEN SEEAL TWO FROM HER.
OK, BREATHE.
KEEP IT TOGEITHR.


AND WHAT IF HE GETS ME SOMETHING AND I DONT RECIPROCAIE? PRISONERS DILEMMA! AAAAAAAAAA!!


I GOT YOU EASTER CANDY
AND A JAR OF HPMMERS.
I PANCKED AND STPPLED
MY HAND TO MY FACE.
WE OVERTHOUGHTTHIS. |


BY RANDALL MUNROE

VALIENTNE'S DAY IS
A CORPORATE CNSTRUCT BUT HaRDTOOPT OUTOF.
I DONT WANT TOBEA
CONSUMER TOOL OR AN
INCONSIDERATE JERK.

HOW DO I FGGTT CLICHE? ITS SUCHA I COUVD GET HER A GIF CONTRIVED ON A DFFEEENT DAY. UT WHATAM I PROVING?



by Bill Amend


PEARLS BEFORE SWINE


10

# woncu Math Clule 

## By Ingid Garduner

KAMSC is definitely a haven for students interested in math and science. However, Western Michigan University is, too. The math department hosts a weekly Math Club meeting where a speaker spends an hour explaining some of the most interesting and mind-boggling math and physics concepts of this century. That sounds intimidating, but the topics are usually friendly to high school students. In fact, the subject matter is often outside of the normal education
 track. Because of this, advanced knowledge is usually unnecessary; all you need is an open mind.

Not all the meetings are this traditional, though. This fall, there was just a "game night" where people brought board games from home and shared them with others. On January 17, there was just a pizza party. And, one of my favorite meetings was a presentation on fake proof methods, such as "proof by vigorous hand-waving," "proof by running out of time," and "proof by scribble," to name a few.

Math Club is a very fun place to be (not to mention a great resource for college/career interviewees), and it's really inspiring to see people who are passionate about mathematics. Basically, Math Club is a nerd's night out. Hope to see you there!

When: Friday afternoons, 4-5 p.m.
Where: Alavi Commons, 6th floor of Rood Hall on WMU's main campus
Website: https://www.wmich.edu/mathclub/index.html
Events Calendar: https:/ /www.wmich.edu/mathclub/calendar.html
Contact: patrick.t.bennett@wmich.edu (He can add you to the email list.)

## The Best Number 7a Write On A Valentine

## By Benjamin Whitsett

As is obvious by its below representation in a heart, the answer is obviously 3. Before I delve into the wonderful world of 3, I would like to apologize for an error. Due to a mistake with the handling of zero, the featured number in the Halloween edition should have been 9, and shall be treated as such for future reference. Tidbits regarding it will be included in this article because it is 3's square.

3 is a factor of 9 , which is the decrement of 10 . Therefore, 3-divisibility may be determined by a digit sum in base 10, as well as in hexadecimal (16$1=3 * 5$ ). 9 is the only value $c$ for which $c=a^{b}=b^{a}+1$ has an integral solution. The sum of the last two digits of the first 4 n powers of 3 is 200 , the sum of whose prime factors allowing repetition is 16 , whose prime factor sum is 8 , which leads to 6 , which leads to 5,5 being the number of terms in the sequence prior to identity in the recursion. It is the first Fermat prime (of the form $2^{2^{n}}+1$ ) and is also the first Mersenne prime (of the form $2^{n}-1$ ). The number-letter conversion of HEART when shifted by 3 yields $\{13,8,4,21,23\}$. The product of the non-zero digits of 13842123's prime factors is 18144 , while $\{18,1+4,4\}$ is the numerical representation, shifted by 3 , of RED: the perfect color for a heart.

$$
\begin{gathered}
\text { Teacher Numbers: } \\
\text { Tanoff }=67 \\
\text { Houtrouw }=47 \\
\text { Therefore... } \\
{\left[\left(\frac{\text { Tanoff }}{\text { Houtrouw }}\right)^{3}\right]=\text { KAMSC }}
\end{gathered}
$$

## Method:

$849^{\text {th }}$ and $10^{\text {th }}$ graders were asked for a random number 0-99 inclusive. For each digit, the option 0-9 with lowest variance in the other digit divided by the number of occurrences was chosen as the representative digit in the final result, in this case, 03. Teacher numbers were not included in the main data set.
*-


# KAMSC-Warthy Pick-Wp Lines By Shelly Alexander 

Our love is like dividing by zero... it cannot be defined.

Forget hydrogen, you're my number one element.

Are you a singularity? Not only are you attractive, but the closer I get to you, the faster time seems to slip by.


How can I know so many digits of pi, but not the 7 digits of your phone number?

My heart is a method, and it was void until I saw you. You surpassed my expected parameter and now I


Baby, you're what I want to get on a USACO monthly; you're a ten out of ten.

I'd give you my cans for the food drive because you deserve all the credit.

You're like my mira from Mrs. Kalnins, I never want to break you.

Are you that one good movie at Sci-Fi film fest because I never want to stop watching you?

Are you the 84 steps to KAMSC because you make my heart race?


## Came Write With Us

Hey KAMSC students! We love being the editors for 84 Steps, but we can't do it without you. If you'd like to help us make every edition full of interesting articles, come write with us! You can write just once, or a few times, or in every edition. If you want to write in every edition, you can even contact us about being added to our list of columnists. If you want to write with us, or you're even considering it, just email kamsc84steps@yahoo.com or talk to Lily Dorstewitz or Shelby Alexander.

Sincerely,
The Editors

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