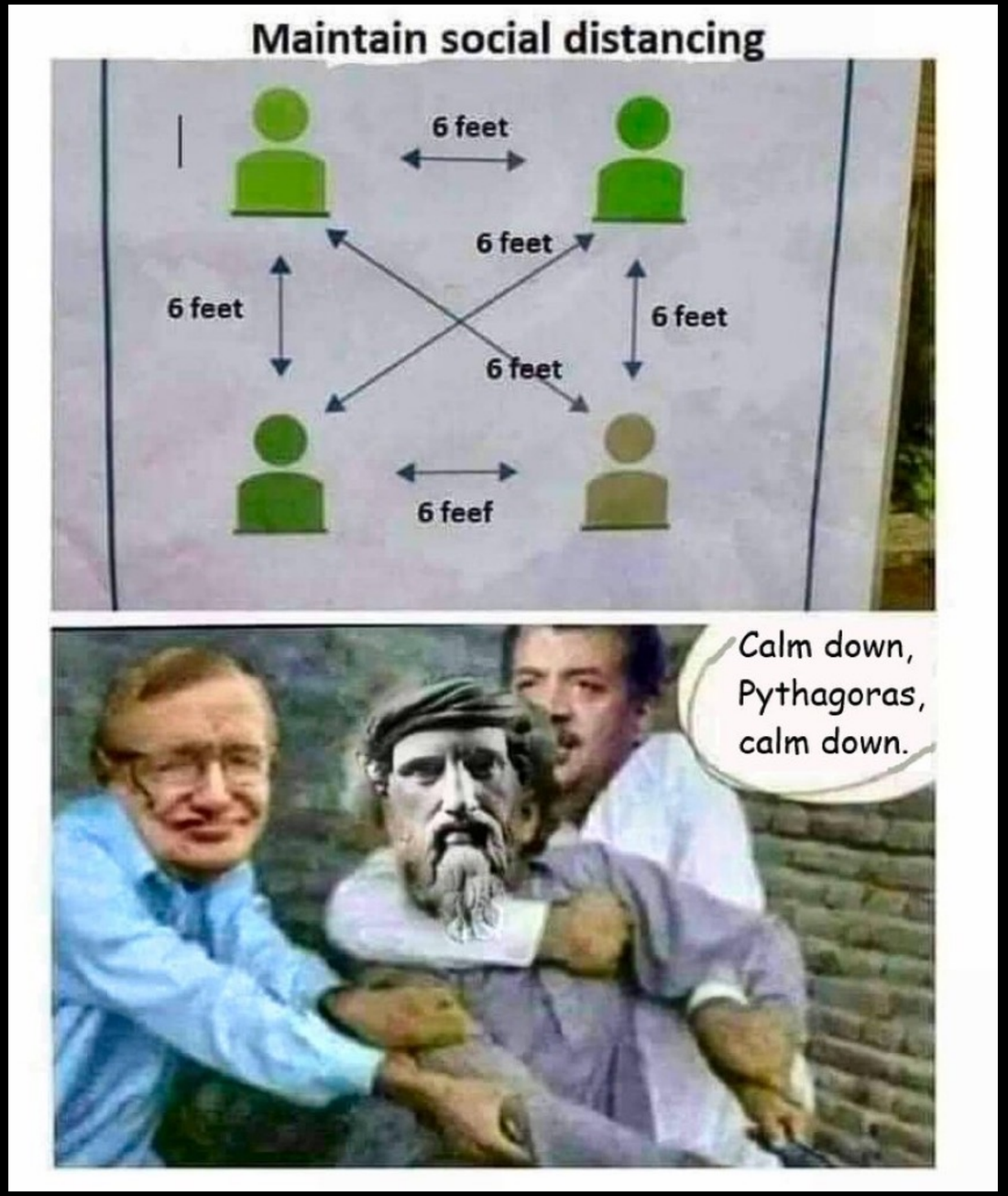
Tutorium 9

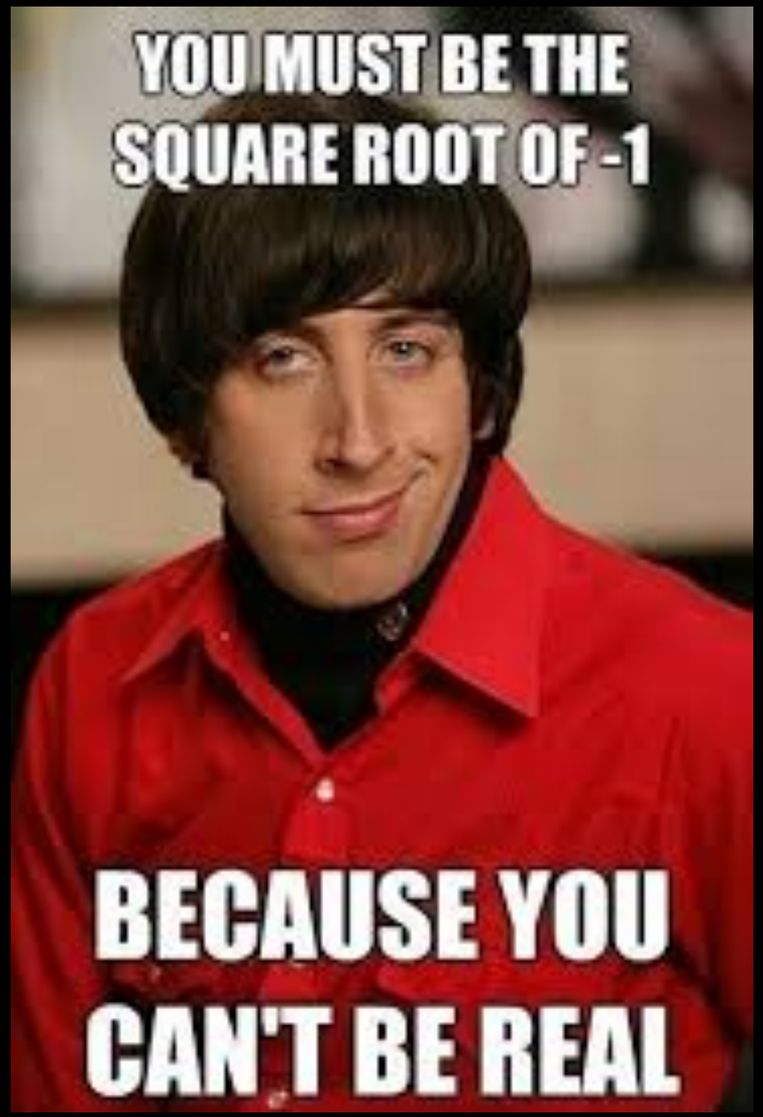

Maintain social distancing
6 feet
6 feet
6 feet
6 feet
6 feet
6 feef
Calm down, Pythagoras, calm down.

Betrag

$$4 + 3i$$

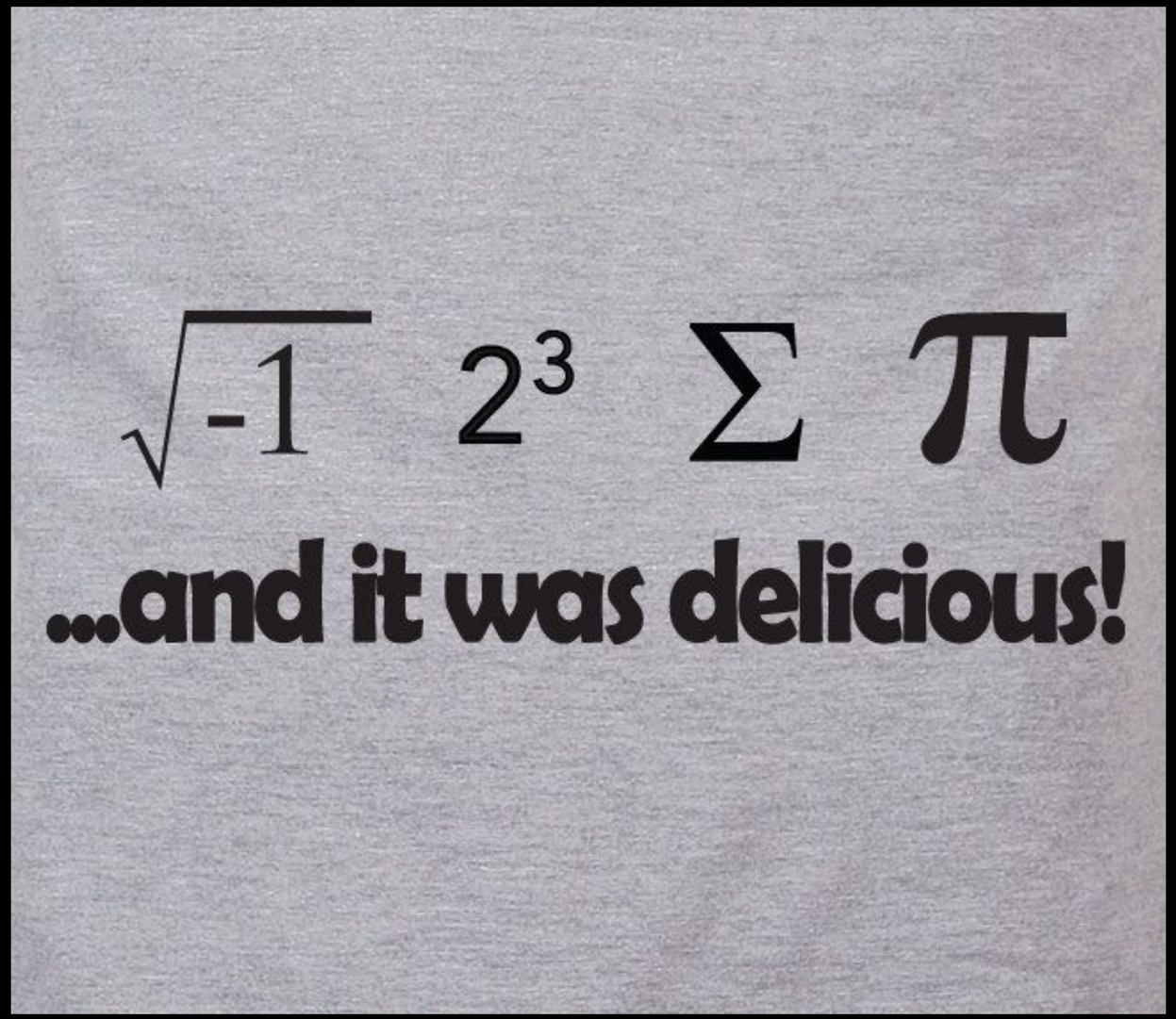
Im Kopf

$$z^4 - 1 = 0$$


YOU MUST BE THE
SQUARE ROOT OF -1
BECAUSE YOU
CAN'T BE REAL

Im Kopf

$$\left(e^{i\pi}\right)^4$$


$\sqrt{-1}$ 2^3 Σ π
...and it was delicious!

Finde die Nullfolge

a) $a_n = \frac{(-1)^n}{n}$

b) $b_n = \frac{n!}{n^3}$

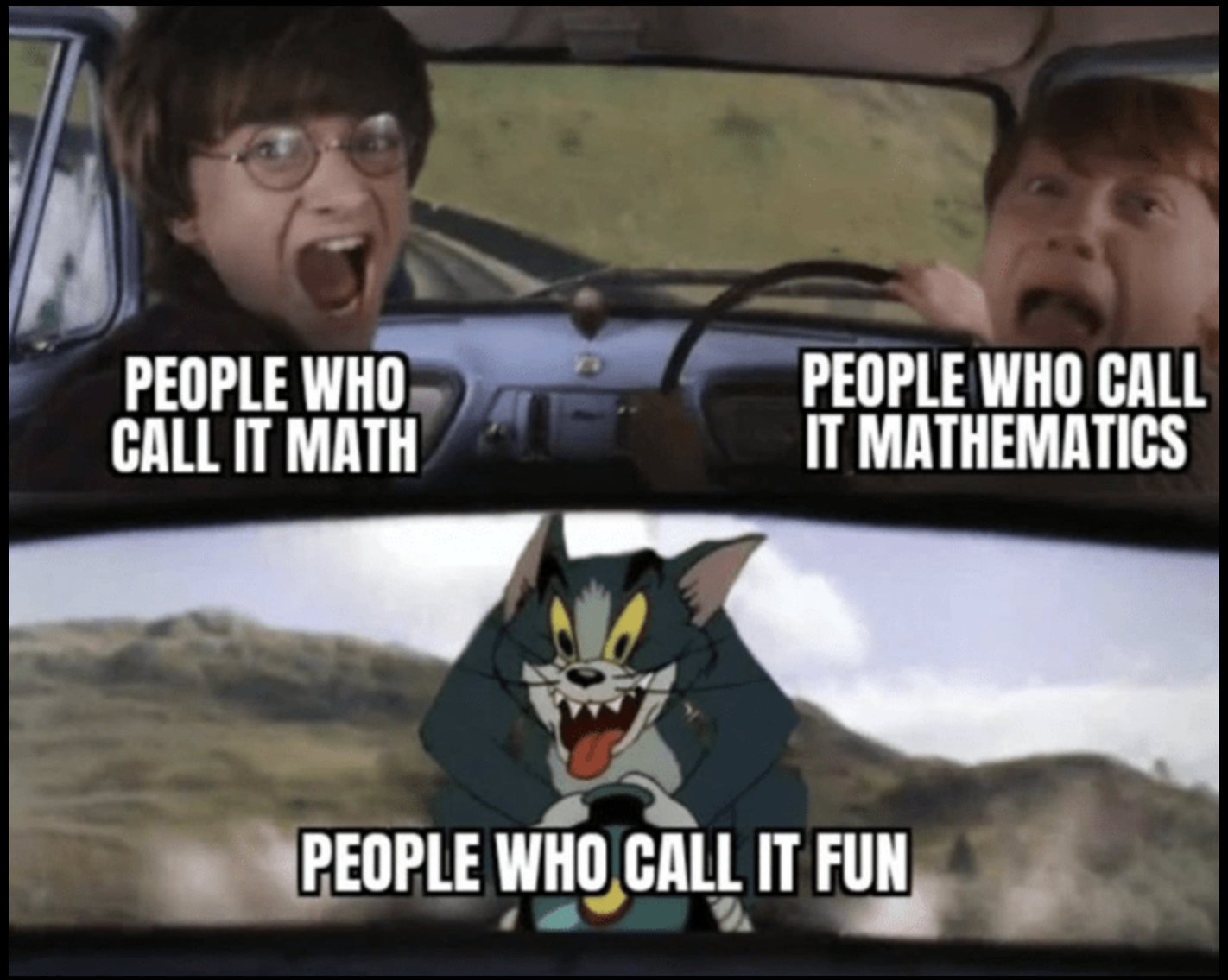
c) $c_n = \left(1+\frac{1}{n}\right)^n$

Finde die Nullfolge

a) $a_n = \frac{5^n}{n^5}$

b) $b_n = (-1)^n$

c) $c_n = 2^{-n}$

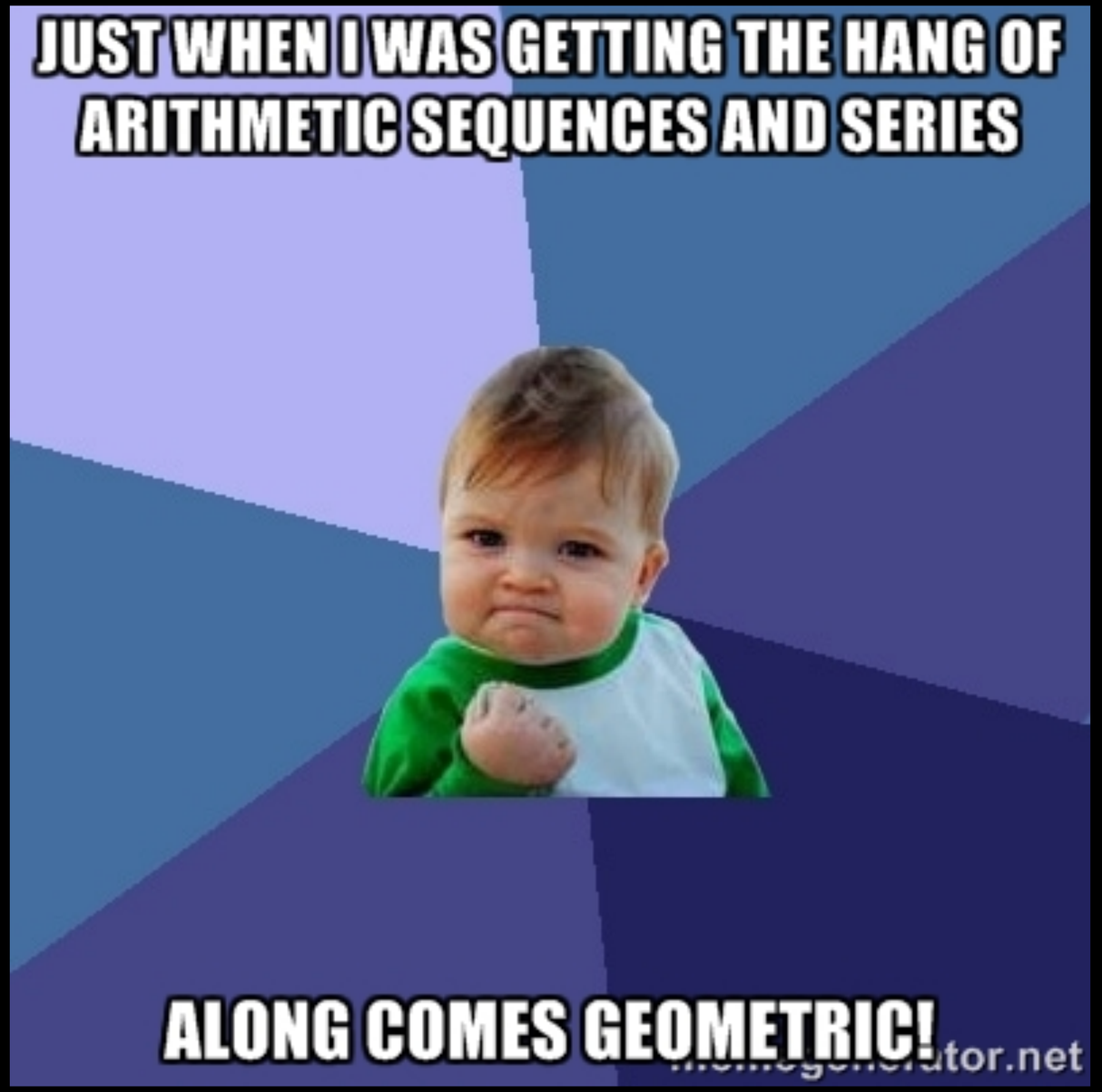

PEOPLE WHO CALL IT MATH
PEOPLE WHO CALL IT MATHEMATICS
PEOPLE WHO CALL IT FUN

Konvergenz?

$$\sum_{n=1}^{\infty} \frac{1}{n^2}$$

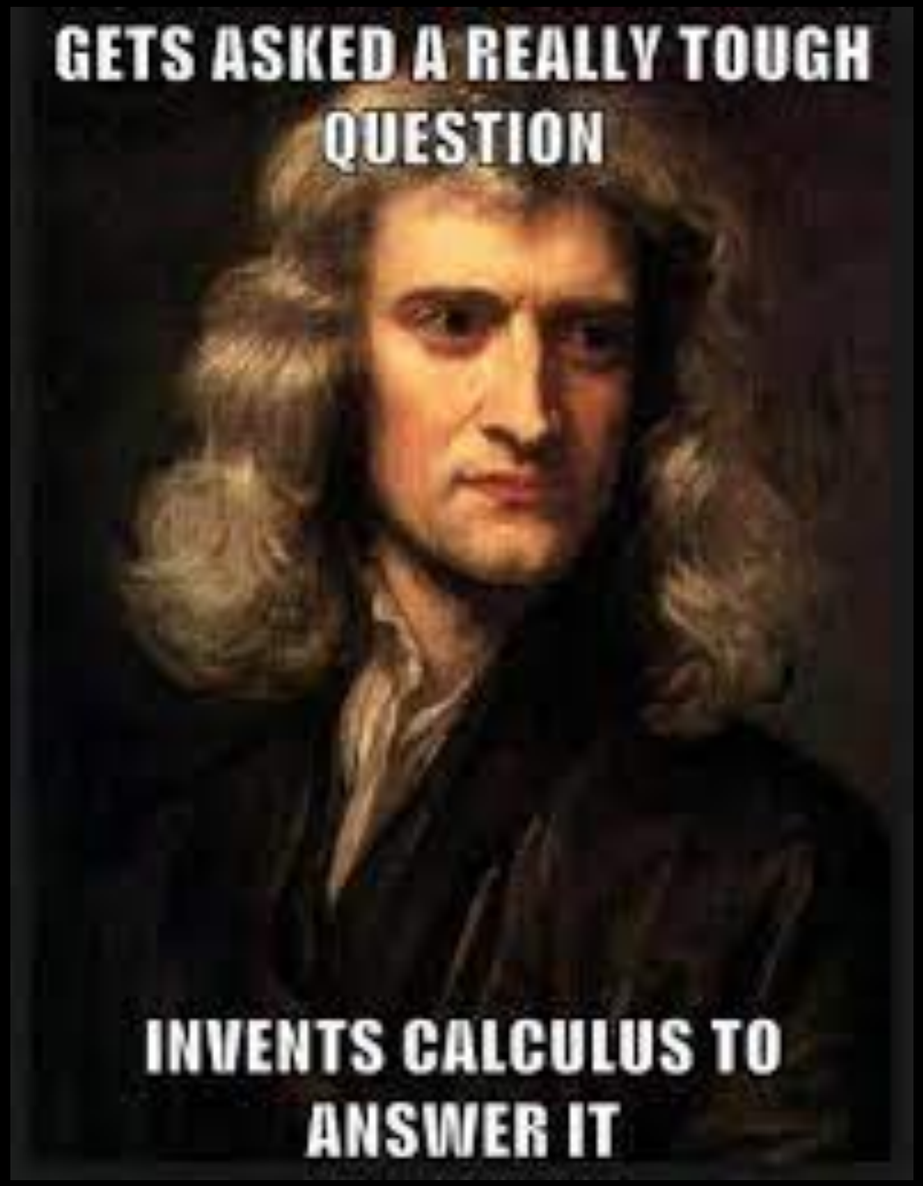
Konvergenz?

$$\sum_{n=1}^{\infty} \frac{1}{\sqrt{n}}$$


JUST WHEN I WAS GETTING THE HANG OF ARITHMETIC SEQUENCES AND SERIES
ALONG COMES GEOMETRIC!

Wert?

$$\sum_{n=0}^{\infty} \left(\frac{1}{3}\right)^n$$


GETS ASKED A REALLY TOUGH QUESTION
INVENTS CALCULUS TO ANSWER IT

Ableitung von

$$\frac{d}{dx}\sin(x)$$

a) $\tan(x)$

b) $\cos(x)$

c) $-\cos(x)$


e^x
d/dx
e^x

Ableitung von

$$\frac{d}{dx}\left(\sin(x^2)\right)$$

a) $2x\cos(x)$

b) $2x\cos(x^2)$

c) $x^2\sin(x)$

$$\frac{\mathrm{d}}{\mathrm{d}x}\frac{1}{x} = \frac{\not{\mathrm{d}}}{\not{\mathrm{d}}x}\frac{1}{x} = -\frac{1}{x}\frac{1}{x} = -\frac{1}{x^2}.$$

Ableitung von

$$\frac{d}{dx}\left(e^{-5x}+x^2+5\right)$$

a) $-5e^{x}+2x$

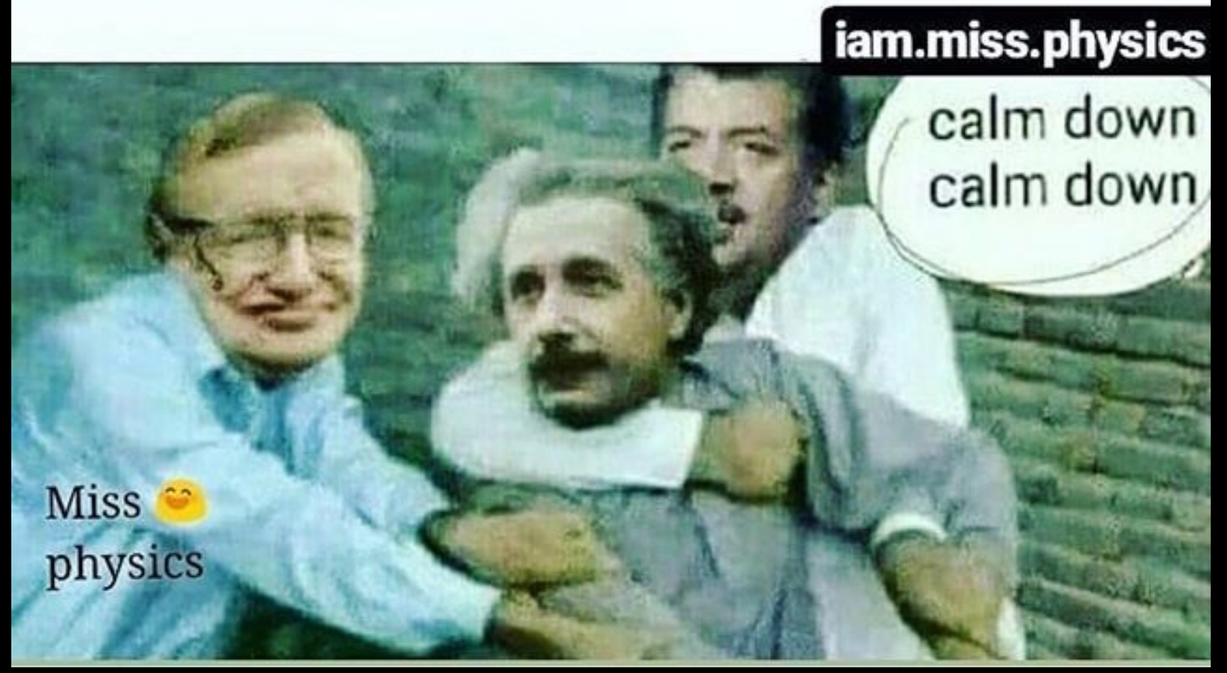
b) $-5e^{-5x}+2x+5$

c) $-5e^{-5x}+2x$

$$1^0 = 1$$

$$1^1 = 1$$

i.e. $0 = 1$



Television Series For:

Engineering	
Physics	
Math