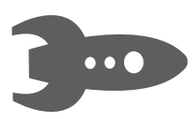
Solar Folds

Fold in the Universe:

1. Passes through  and $(-2, -80)$.

2. Follow the trajectory of 

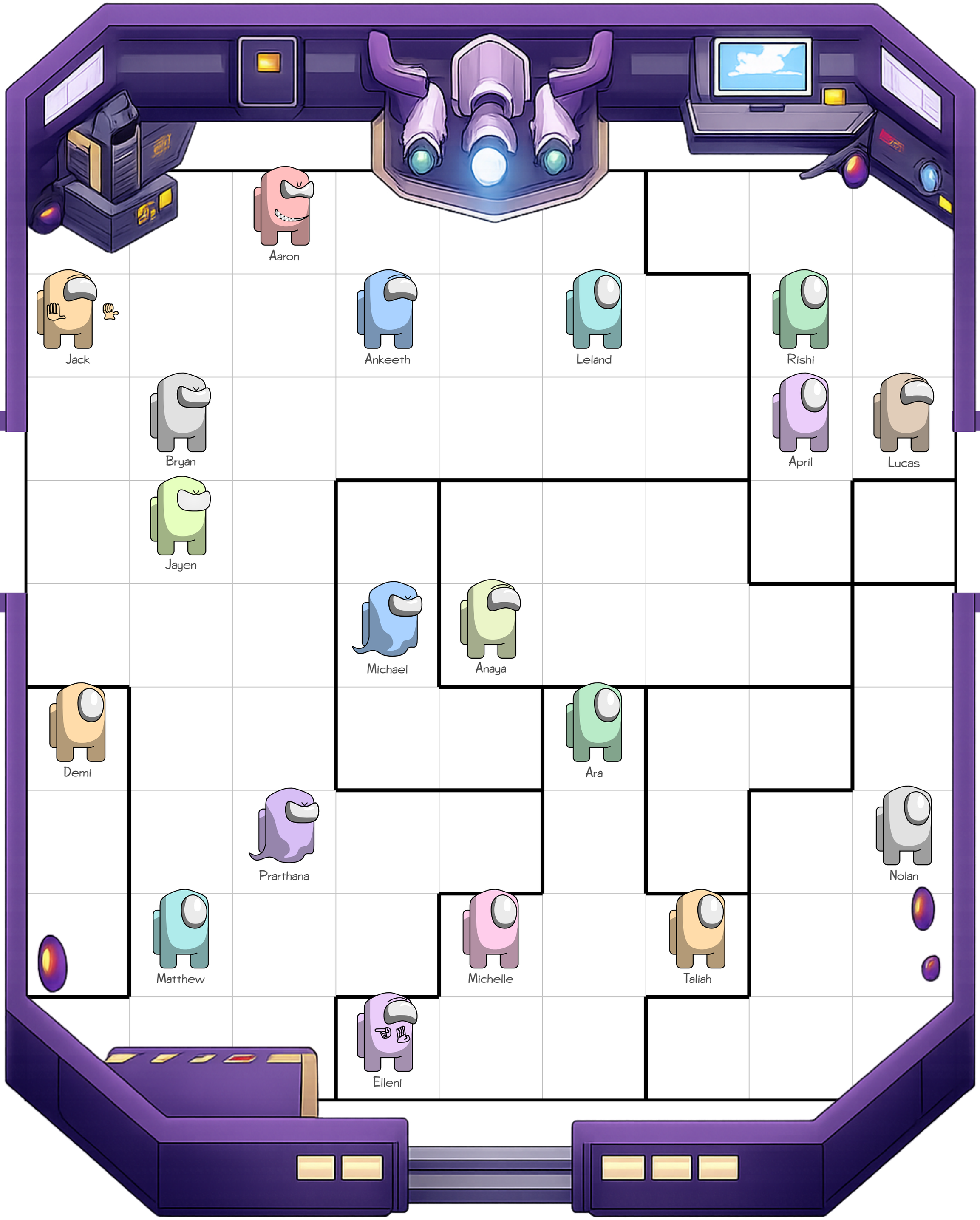
3. Is perpendicular to the y-axis and passes through $(12, 30)$.

4. Is a horizontal tangent to the Gauss Belt, and every value in its range is negative.

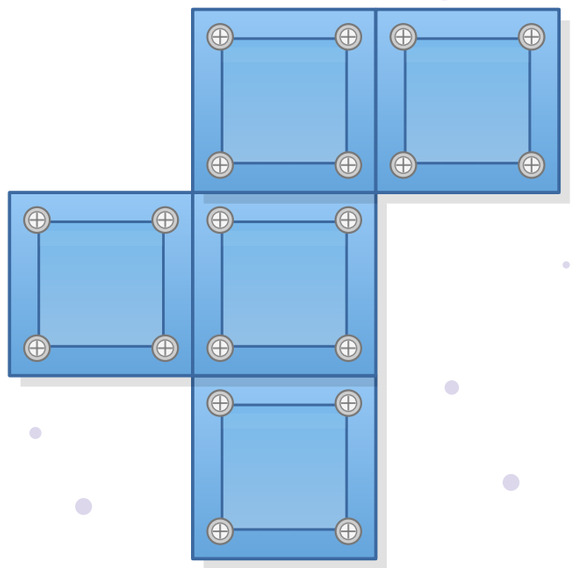
5. Is perpendicular to $y = -x$ and passes through 

6. Is perpendicular to the x-axis and passes through $(43, -56)$.

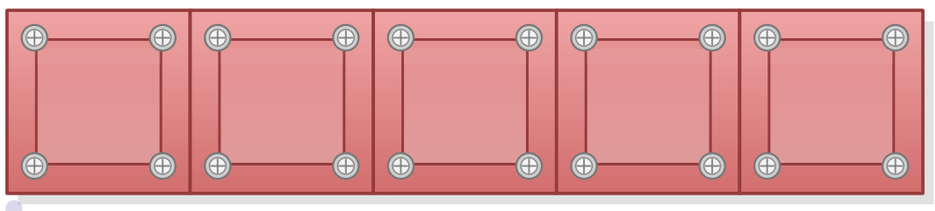
Engine Room


Aaron
Jack
Ankeeth
Leland
Rishi
Bryan
April
Lucas
Jayen
Michael
Anaya
Demi
Ara
Prarthana
Nolan
Matthew
Michelle
Taliah
Elleni

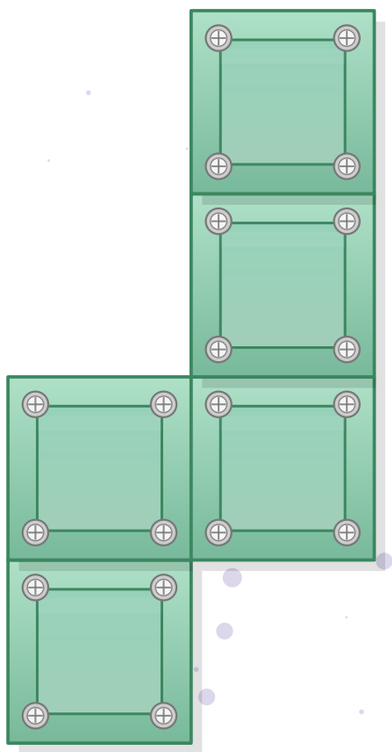
Polycores



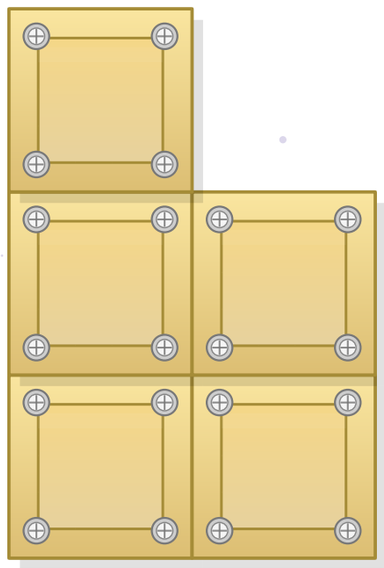
$$f(x) = x^2 + 1$$



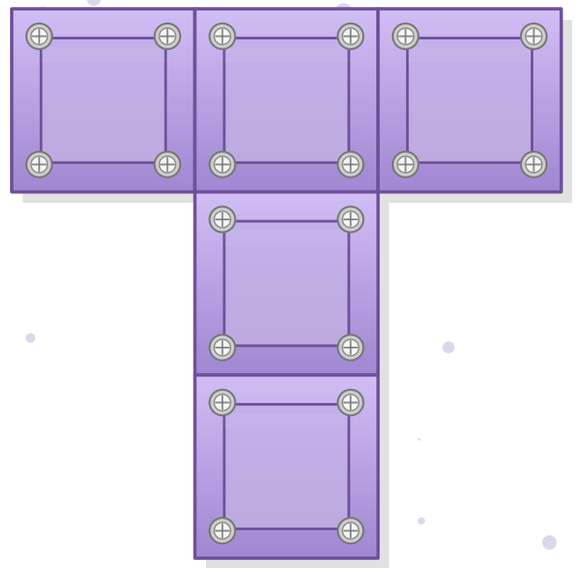
$$l(x) = 3x - 2$$



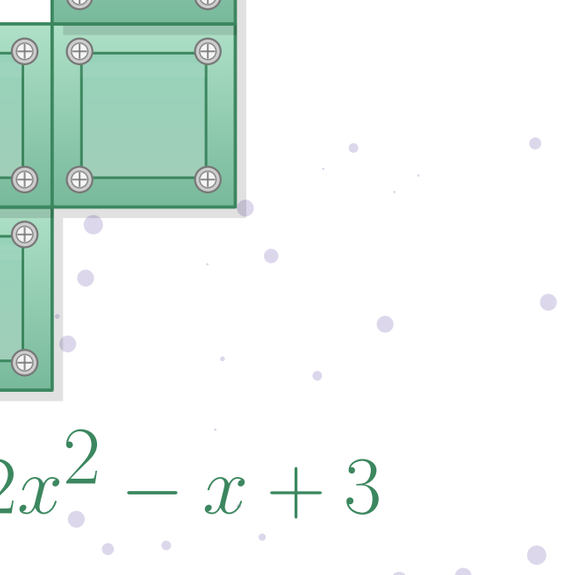
$$n(x) = 2x^2 - x + 3$$



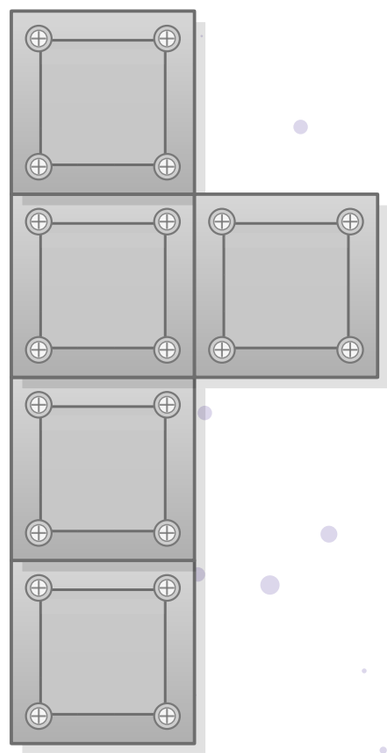
$$p(x) = 2x + 1$$



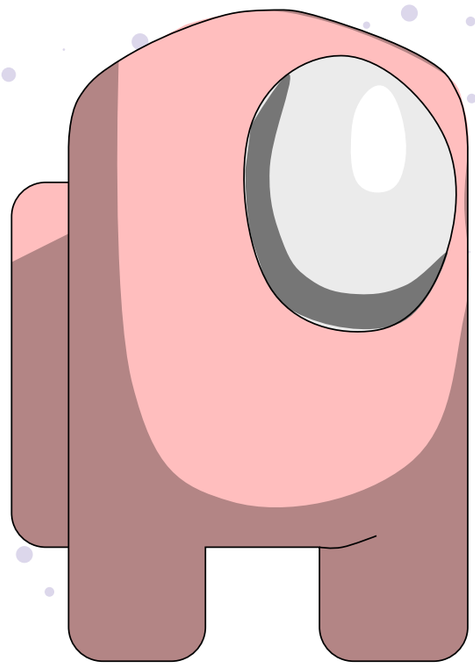
$$t(x) = 2x$$



$$w(x) = x^2 - 4x + 1$$



$$y(x) = 4x + 1$$

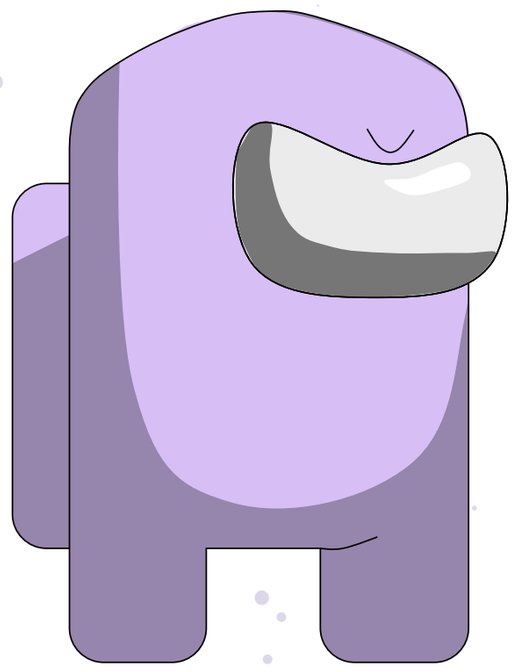


Aaron (ID 3)

Statement:

Let $f(x) = 2x + 1$ and $g(x) = x^2$. Then

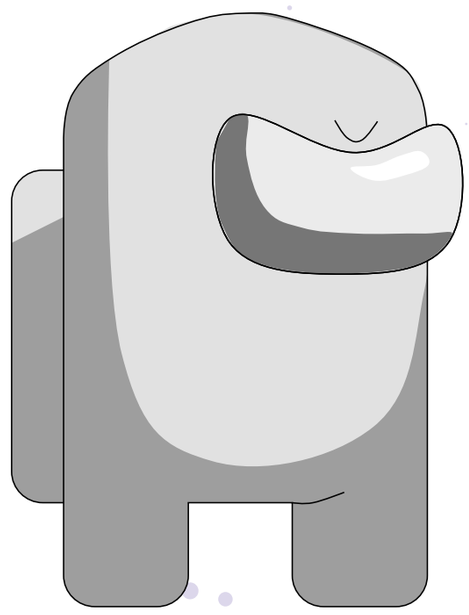
$$f(g(f(x))) = 4x^2 + 4x + 2.$$



Aayat (ID 4)

Statement:

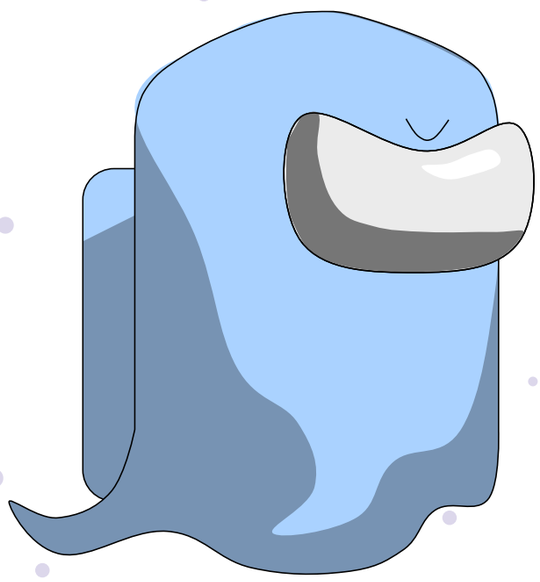
The set of rational numbers $\mathbb{Q}$ is countable.



Bryan (ID 8)

Statement:

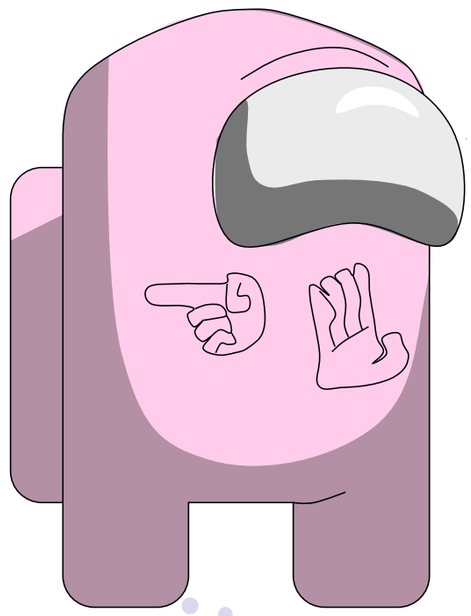
Multiplying 1620 by 5 produces a perfect square.



Michael (ID 10)

Statement:

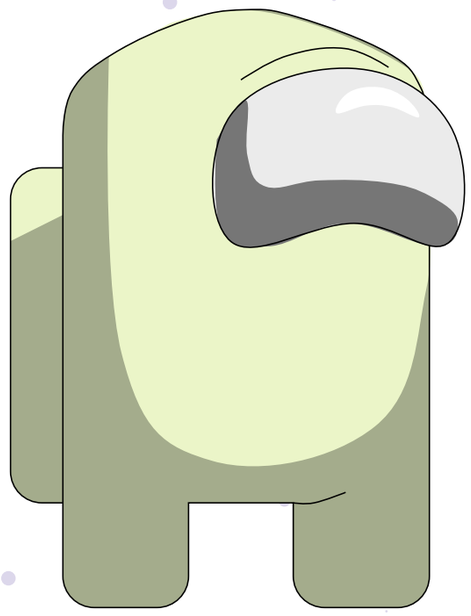
The probability that a randomly chosen divisor of $1620 = 2^2 \cdot 3^4 \cdot 5$ is even is $\frac{2}{3}$.



Elsa (ID 13)

Statement:

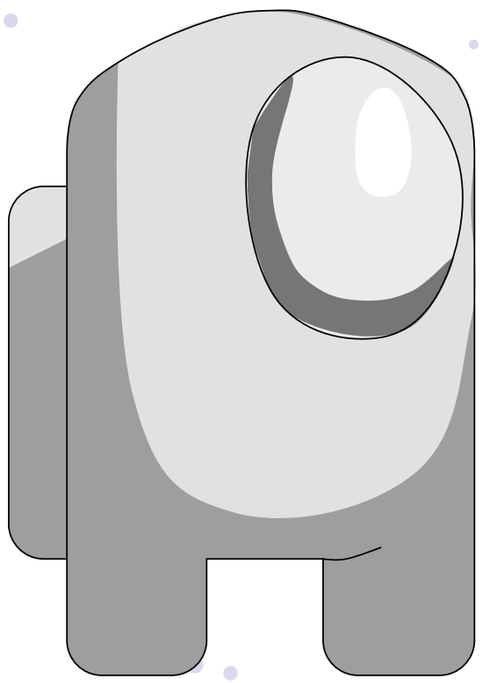
For any nonzero real number x, $x^0 = 0$.



Anaya (ID 14)

Statement:

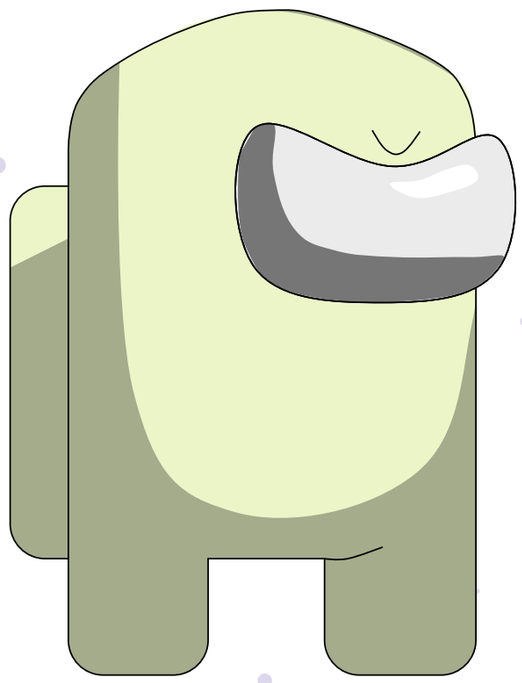
A relation is a function $f : A \to B$ when every input in A is paired with *one and only one* output in B.



Nolan (ID 22)

Statement:

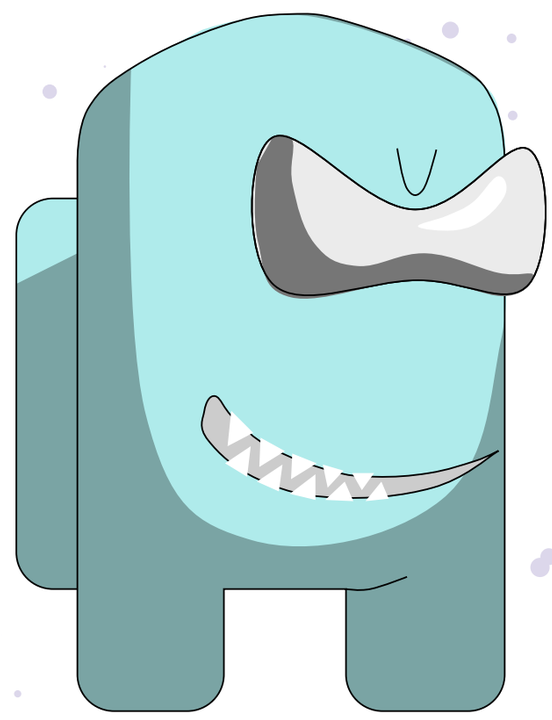
$0^0 = 1$.



Armin (ID 23)

Statement:

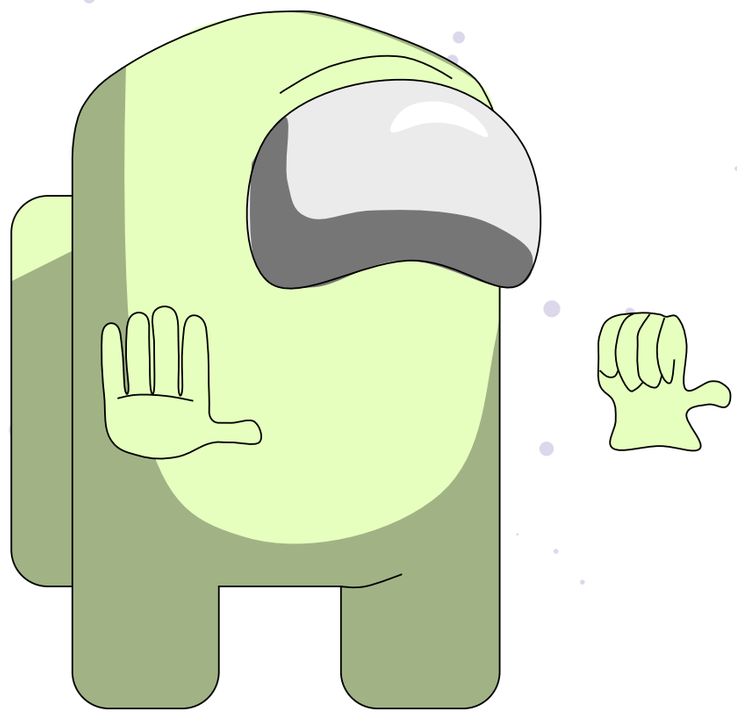
$x^2 - 9x + 20$ factors as $(x - 4)(x - 4)$.



Matthew (ID 24)

Statement:

$$2^3 + 2^3 = 2^6$$



Aydin (ID 26)

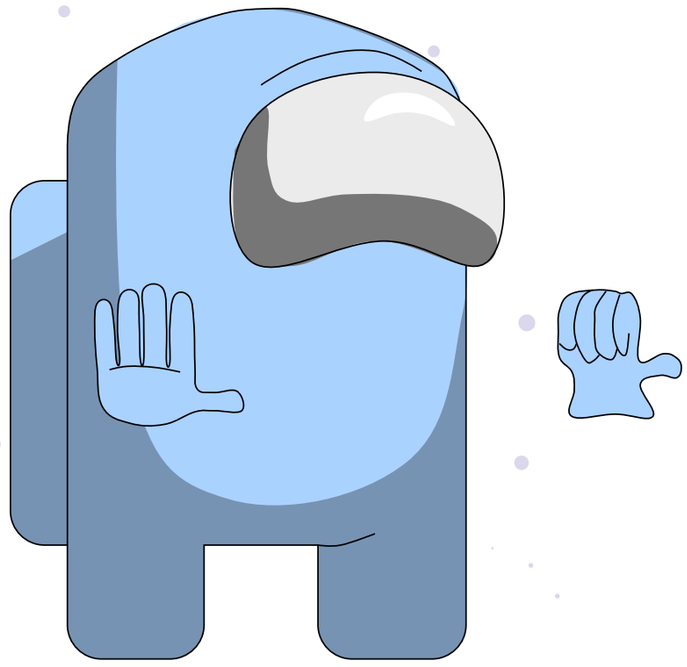
Statement:

For all real x, $\sqrt{x^2} = x$.

Prarthana (ID 18)

Statement:

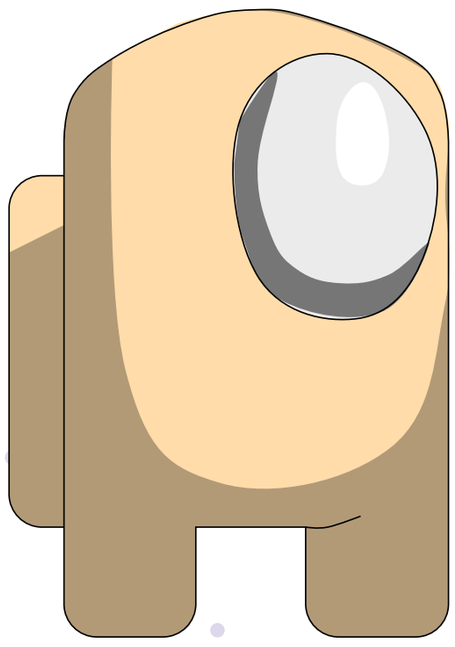
For all real x, $(x^3)^2 = x^5$.



Alina (ID 19)

Statement:

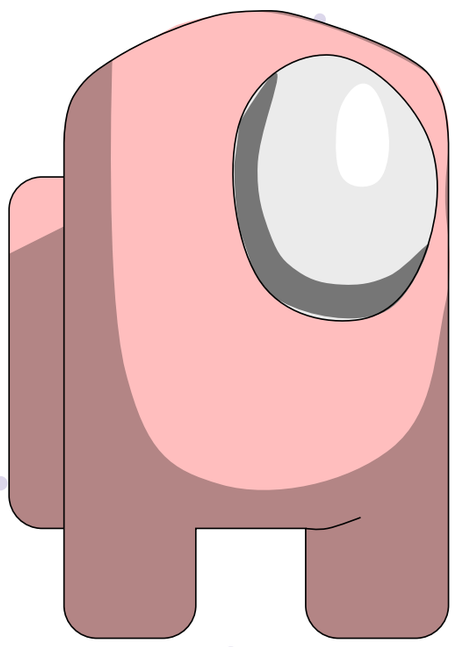
For all real x, $(2x)^4 = 2x^4$.



Demi (ID 20)

Statement:

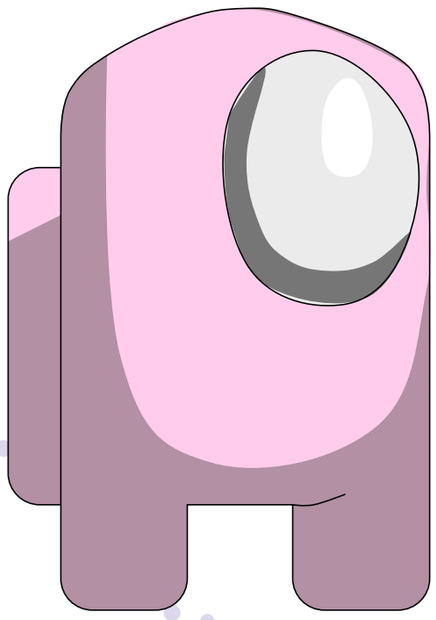
For all real numbers a and b, $\dfrac{1}{a+b} = \dfrac{1}{a} + \dfrac{1}{b}$.



Mariam (ID 21)

Statement:

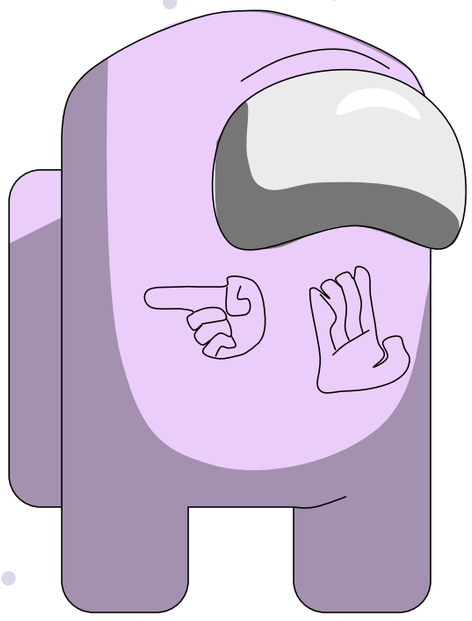
For all real x, $\sqrt{x^6} = x^3$.



Michelle (ID 25)

Statement:

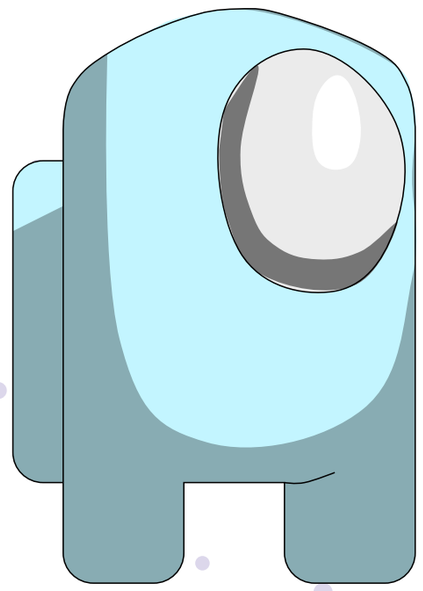
For all real numbers x and y, $(x+y)^2 = x^2 + y^2$.



Elleni (ID 27)

Statement:

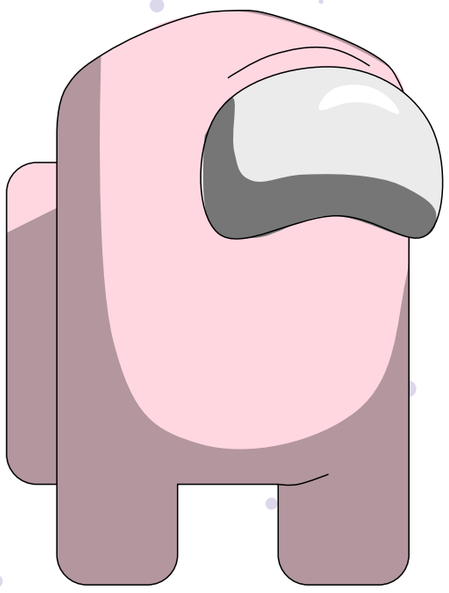
For every prime number p, the number p^2 has exactly two positive divisors.



Lily (ID 28)

Statement:

For all real numbers x and y, $(x^2y^3)^2 = x^4y^5$.



Mya (ID 29)

Statement:

For every natural number n, the number n^2 has twice as many positive divisors as n.