Documentation:

This resource is a reference to how to use Algebraic Equation GPT4. A comprehensive list of examples are provided. The examples are not exhaustive.

Cascade these basic ideas, extend and extrapolate them to use keystrokes and verbose.

ase 1: Linear Expressior Mathematics	Keystrokes	Verbalise
3x+7	3x + 7	"Three x plus seven"
5x + 7 $5 - 2x = -9$	5 - 2x = -9	"Five minus two x equals negative nine"
$J-2\lambda=-9$	3-21-9	"Five subtract two x equals negative nine"
		1 1100 Subtract two x equats fiegative fillie
ase 2: Fractions (simple	variables)	
Mathematics	Keystrokes	Verbalise
x	x/3	"x over three"
$\frac{\pi}{3}$		
1	(1/3) x	"One third x"
$\frac{1}{3}x$		
1	• (2x)/5	"Two fifth x"
$ \begin{array}{c c} \bullet & \frac{2x}{5} \\ \bullet & \frac{2}{5}x \end{array} $	• (2x)/5	• "Two x over 5"
5	• (2/5)x	Two over 5 x Two over 5 x Two over 5 x
$\left \cdot \right = \frac{2}{x}$		• Two over 5 x
5		
1 2	2/(7x)	"Two over open seven x close "
1 -		
Notice how we have 3 wa		" denotes ")" to the GPT. have to be very specific with denominators.
It is apparent now that sa Notice how we have 3 wa ase 3: Powers, Exponents	ays to verbalise Eg. 2c and in Eg. 2d	have to be very specific with denominators.
It is apparent now that sa Notice how we have 3 was Case 3: Powers, Exponents Mathematics	keystrokes	have to be very specific with denominators. Verbalise
It is apparent now that sa Notice how we have 3 was Case 3: Powers, Exponents Mathematics	ays to verbalise Eg. 2c and in Eg. 2d	have to be very specific with denominators. Verbalise "x square"
It is apparent now that sa Notice how we have 3 was as: Powers, Exponents Mathematics x ²	keystrokes	have to be very specific with denominators. Verbalise
It is apparent now that sa Notice how we have 3 was Case 3: Powers, Exponents Mathematics a x ² b x ³	Keystrokes x^2	have to be very specific with denominators. Verbalise "x square"
It is apparent now that sa Notice how we have 3 was Case 3: Powers, Exponents Mathematics x^2 x^3	Keystrokes x^2 x^3; x3	verbalise "x square" "x cube"
It is apparent now that sa Notice how we have 3 was Case 3: Powers, Exponents Mathematics x^2 x^3 $5x^4$ $2x^3 + 3x^2 = 5x + 6$	Keystrokes x^2 x^3; x3 5x^4 2x^3 + 3x^2 = 5x + 6	Verbalise "x square" "x cube" "5 x power 4"
It is apparent now that sa Notice how we have 3 was Case 3: Powers, Exponents Mathematics x^2 x^3 $5x^4$ $2x^3 + 3x^2 = 5x + 6$	Keystrokes x^2 x^3; x3 5x^4 2x^3 + 3x^2 = 5x + 6	Verbalise "x square" "5 x power 4" "2x cube plus 3x square equals 5x plus 6"
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It is apparent now that sa Notice how we have 3 was Case 3: Powers, Exponents Mathematics x^2 x^3 $5x^4$ $2x^3 + 3x^2 = 5x + 6$ $4x^3 + (2x)^2 = (3x)^3 - 2x$ Case 4: Radicals	Keystrokes x^2 x^3; x3 5x^4 2x^3 + 3x^2 = 5x + 6 4x^3 + (2x)^2 = (3x)^3 - 2 + 1	Verbalise "x square" "5 x power 4" "2x cube plus 3x square equals 5x plus 6" "4 x cube plus open 2x close squared = open 3x close cube minus 2x plus 1"
It is apparent now that sa Notice how we have 3 was Case 3: Powers, Exponents Mathematics x^2 x^3 $5x^4$ $2x^3 + 3x^2 = 5x + 6$	Keystrokes x^2 x^3; x3 5x^4 2x^3 + 3x^2 = 5x + 6 x+1 4x^3 + (2x)^2 = (3x)^3 - 2 + 1 Keystrokes	Verbalise "x square" "5 x power 4" "2x cube plus 3x square equals 5x plus 6" "4 x cube plus open 2x close squared = open 3x close cube minus 2x plus 1" Verbalise
It is apparent now that says Notice how we have 3 was as a sea 3: Powers, Exponents Mathematics x^2 x^3 $5x^4$ $2x^3 + 3x^2 = 5x + 6$ $4x^3 + (2x)^2 = (3x)^3 - 2x$ Case 4: Radicals Mathematics	Keystrokes x^2 x^3; x3 5x^4 2x^3 + 3x^2 = 5x + 6 4x^3 + (2x)^2 = (3x)^3 - 2 + 1	Verbalise "x square" "5 x power 4" "2x cube plus 3x square equals 5x plus 6" "4 x cube plus open 2x close squared = open 3x close cube minus 2x plus 1"
It is apparent now that says Notice how we have 3 was Notice how we have 3 was Notice how we have 3 was Case 3: Powers, Exponents Mathematics x^2 x^3 $5x^4$ $2x^3 + 3x^2 = 5x + 6$ $4x^3 + (2x)^2 = (3x)^3 - 2x$ Case 4: Radicals Mathematics \sqrt{x}	Keystrokes x^2 x^3; x3 5x^4 2x^3 + 3x^2 = 5x + 6 x+1 4x^3 + (2x)^2 = (3x)^3 - 2 + 1 Keystrokes	Verbalise "x square" "5 x power 4" "2x cube plus 3x square equals 5x plus 6" "4 x cube plus open 2x close squared = open 3x close cube minus 2x plus 1" Verbalise
It is apparent now that says Notice how we have 3 was a season of the says of	Keystrokes x^2 x^3; x3 5x^4 2x^3 + 3x^2 = 5x + 6 x+1 4x^3 + (2x)^2 = (3x)^3 - 2 + 1 Keystrokes x^(1/2)	Verbalise "x square" "5 x power 4" "2x cube plus 3x square equals 5x plus 6" "4 x cube plus open 2x close squared = open 3x close cube minus 2x plus 1" Verbalise "root x"
It is apparent now that says Notice how we have 3 was a sea 3: Powers, Exponents Mathematics x^2 x^3 x^3 x^3 x^4 x^3 x^4 x^3 x^4 x^3 x^4 x^4 x^2 x^3 x^4 x^2 x^3 x^4	Keystrokes x^2 x^3; x3 5x^4 2x^3 + 3x^2 = 5x + 6 x+1 4x^3 + (2x)^2 = (3x)^3 - 2 + 1 Keystrokes x^(1/2) (2x)^(1/3)	Verbalise "x square" "x cube" "5 x power 4" "2x cube plus 3x square equals 5x plus 6" "4 x cube plus open 2x close squared = open 3x close cube minus 2x plus 1" Verbalise "root x" "cube root of 2x"
It is apparent now that says Notice how we have 3 was as a sequence of the same of the sa	Keystrokes x^2 x^3; x3 5x^4 2x^3 + 3x^2 = 5x + 6 4x^3 + (2x)^2 = (3x)^3 - 2 + 1 Keystrokes x^(1/2) (2x)^(1/3) (3x + 1)^(1/2)	Verbalise "x square" "5 x power 4" "2x cube plus 3x square equals 5x plus 6" "4 x cube plus open 2x close squared = open 3x close cube minus 2x plus 1" Verbalise "root x" "cube root of 2x" "root of open two x plus 1 close"

Ca	Case 5: Logarithms			
	Mathematics	Keystrokes	Verbalise	
а	$\lg x$	Logx	"log x"	
b	$\ln x$	ln x	"Lawn x"	
С	$\log_4 x$	Log x base 4	"Log x base 4"	
d	$\log_x 7$	Log 7 base x	"Log 7 base x"	
е	$\log_5(1+4x)$	Log (1 + 4x) base 5	"Log open 1 plus 4x close base 5"	
f	$\log_5(4x-3)^2$	Log (4x - 3)^2 base 5	"Log open 4x minus 3 close power 2 base 5"	
g	$\frac{1}{2}\log_5(4x-3) = 9$	(1/2) Log (4x -3) base 5 = 9	"Half Log open 4x minus 3 close base 5 equals 9"	

Algebraic Equation GPT4 understands natural language.

It will be able to transcribe the query well if equation is articulated without ambiguity.

Case 6: Trigonometry

	Mathematics	Keystrokes	Verbalise
а	$\sin x$	sin x	"sine x"
b	$\cos(2x+1)$	cos(2x +1)	"cosine open 2x plus 1 close "
С	$\tan(1+3x)^2$	tan(3x +1)^2	"tangent open 1 plus 3x close square"
d	$\sec\sqrt{2x-3} = 5$	sec[(2x - 1)^(1/2)]	"secant root open two x minus 3 close equals 5"

Notice that the difficulty of keying radicals with symbols is circumvent with representing them by indices.

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	Mathematics	Keystrokes	Verbalise
а	$\frac{d}{dx}(4x^2-1)^3$	d/dx (4x^2 - 1)^3	"diffentiate open 4x squared minus one close power 3 with respect to x"
b	$\int_1^3 \sqrt{4x^2 - 1} \ dx$	Integrate root (4x^2 - 1) w.r.t x from 1 to 3	Integrate root open 4x squared minus 1 close with respect to x from 1 to 3