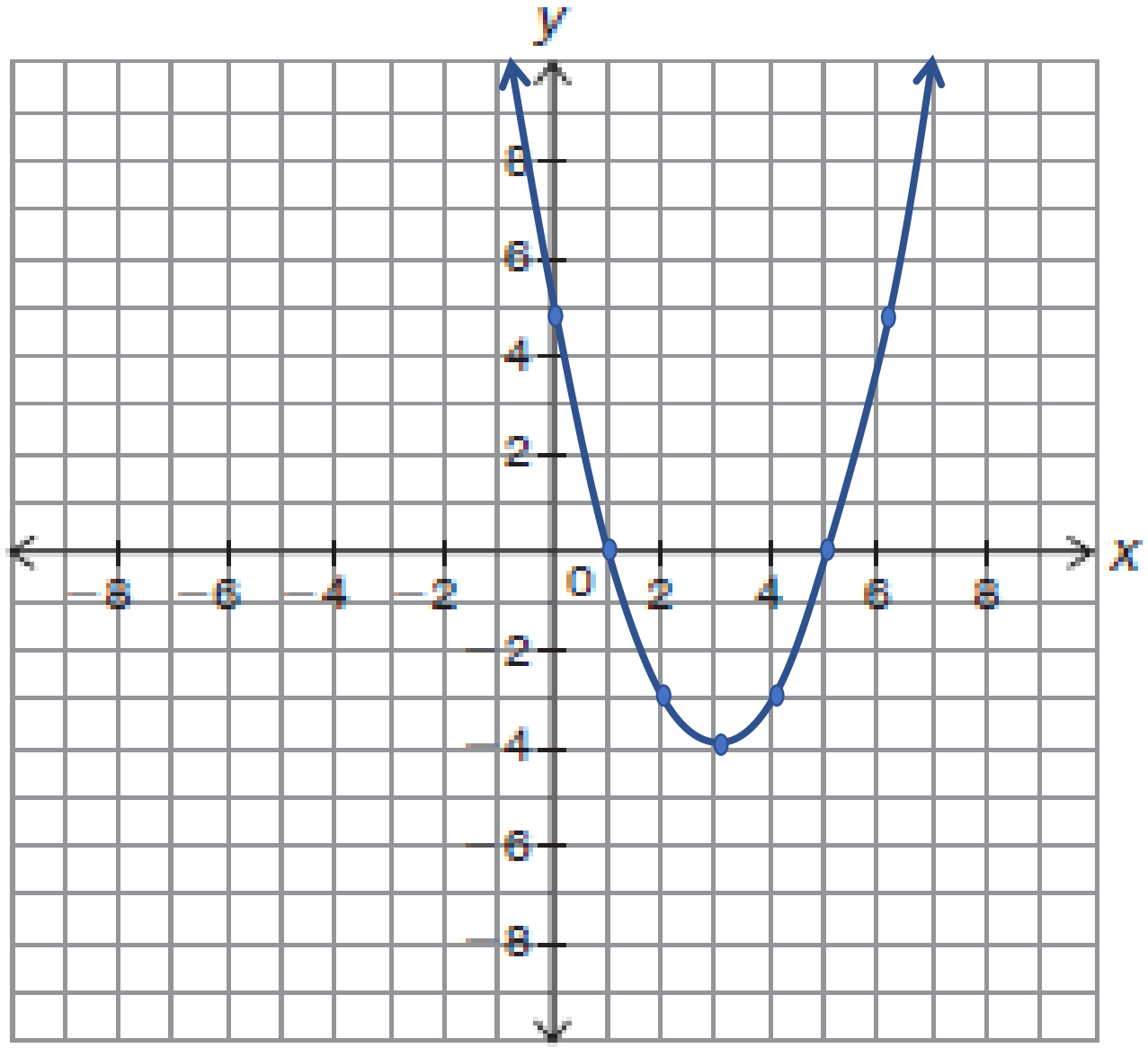
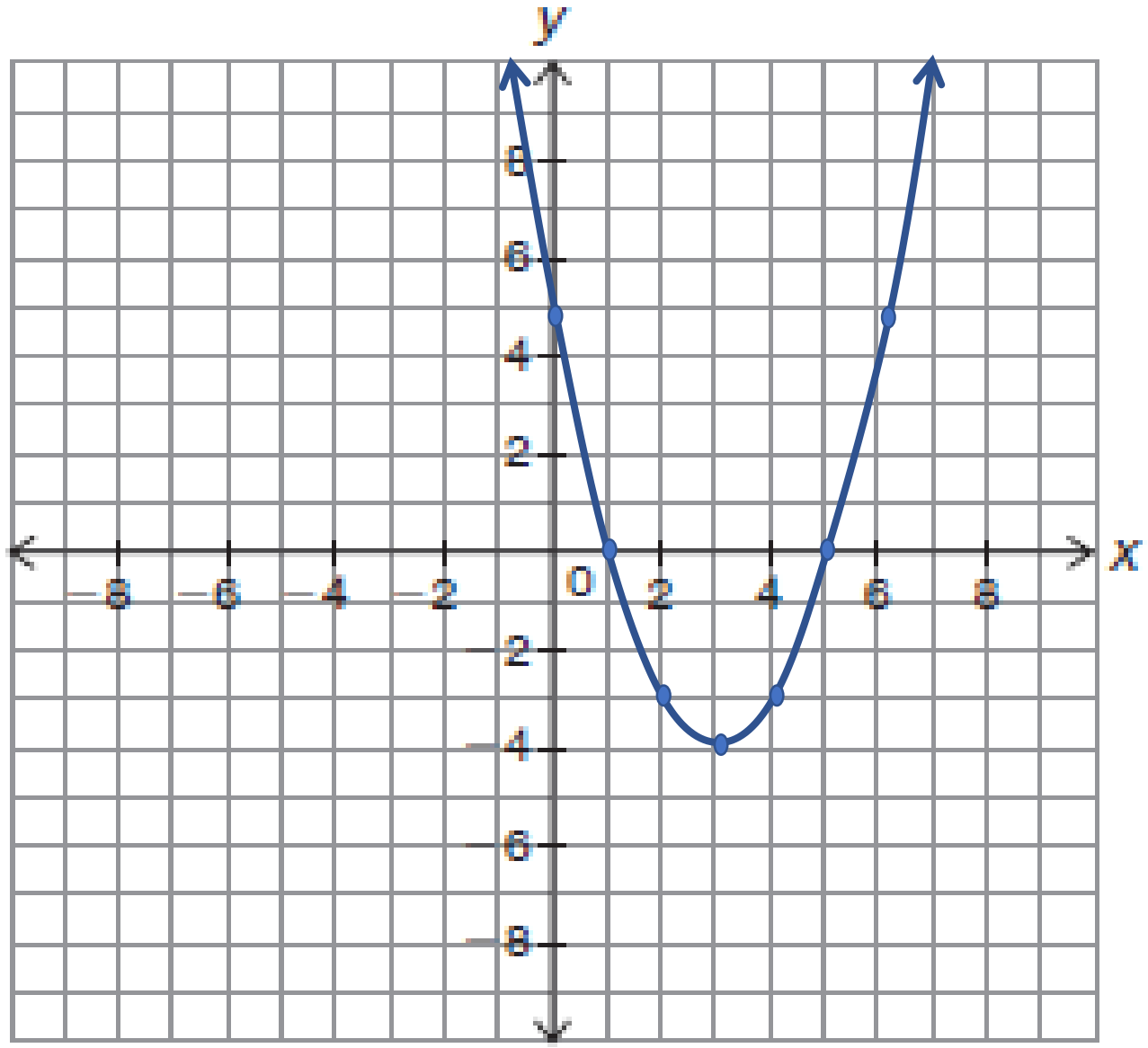
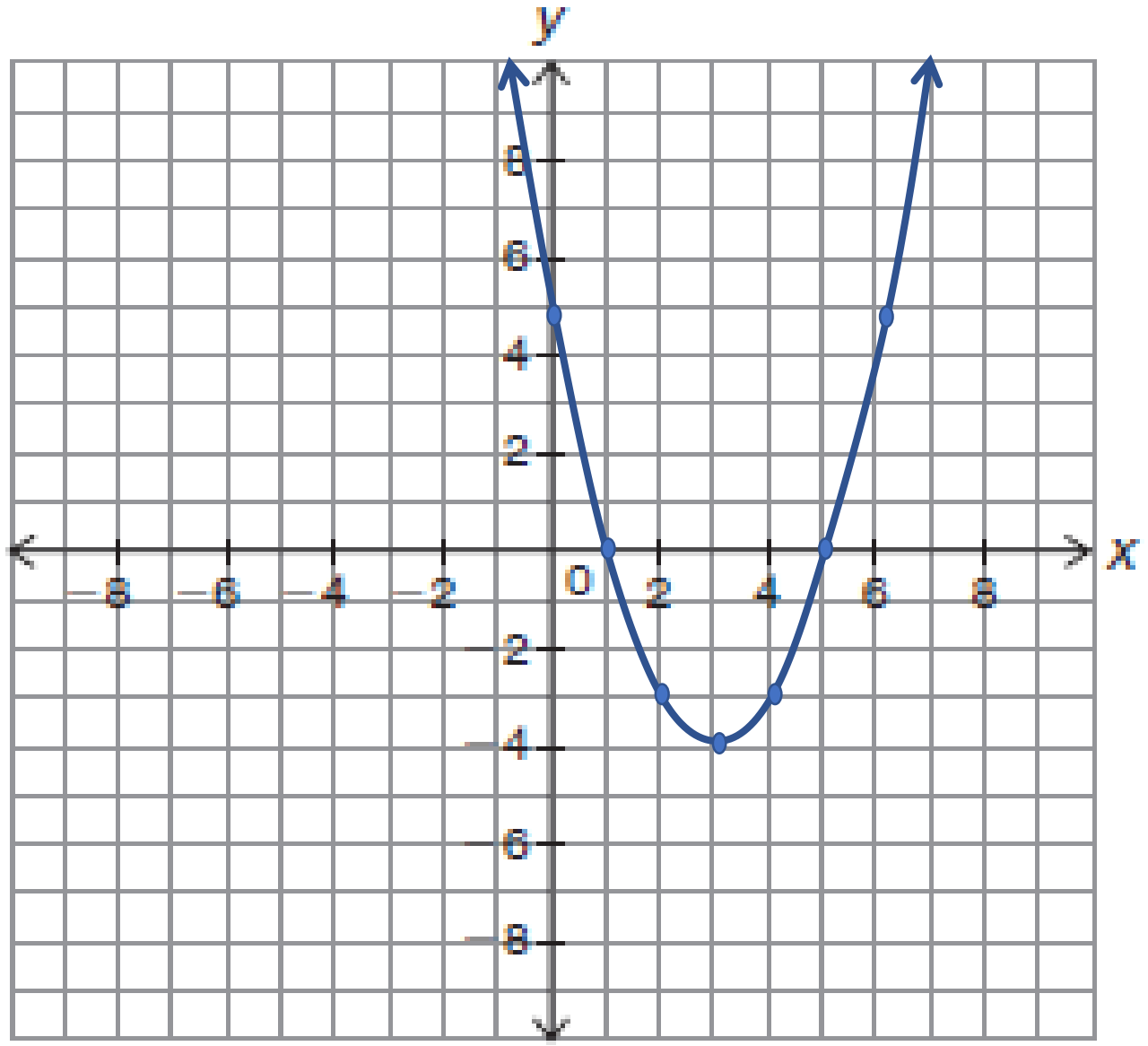
What is this graph called?



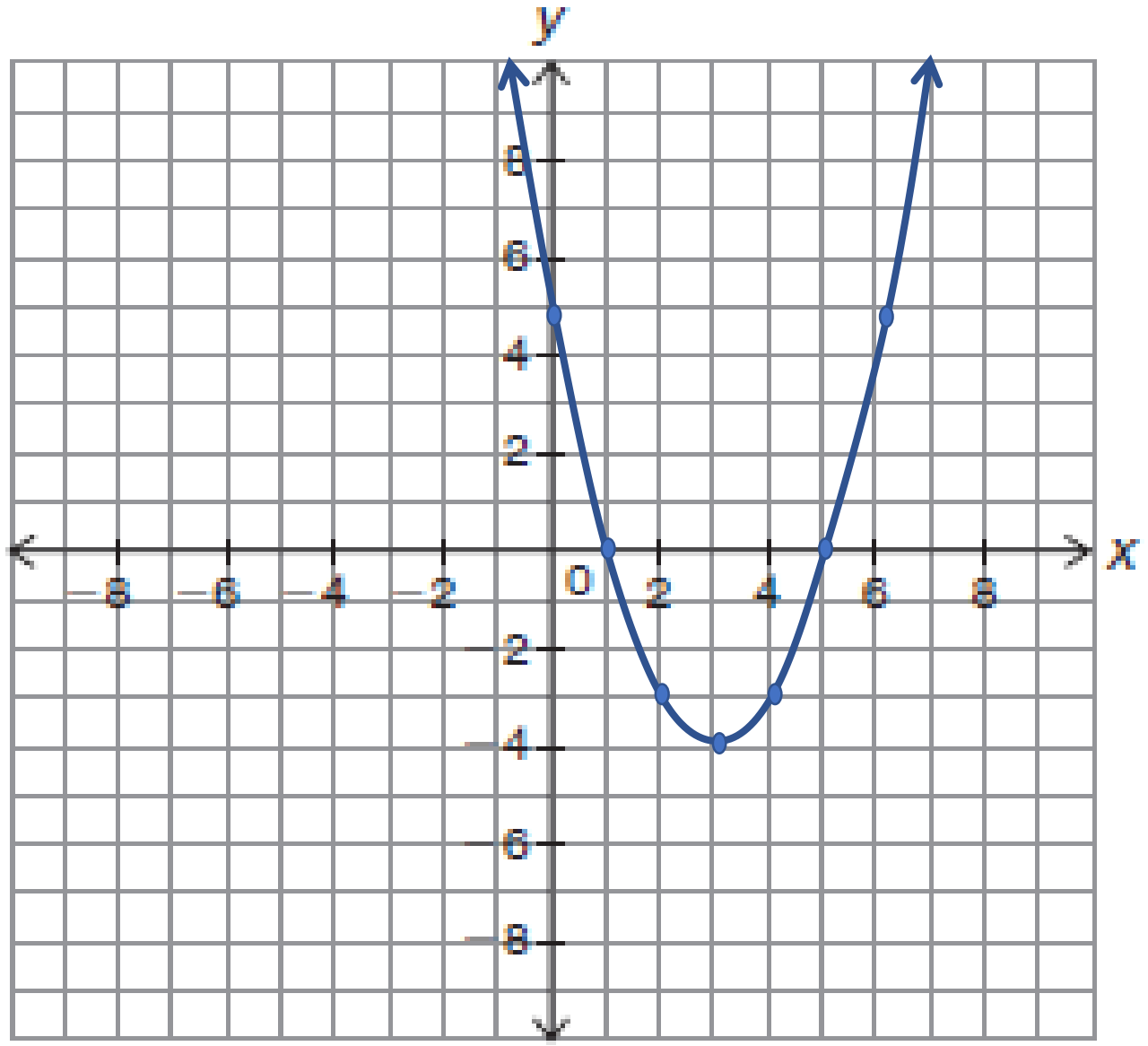
Does this Graph open **Up** or **Down?**



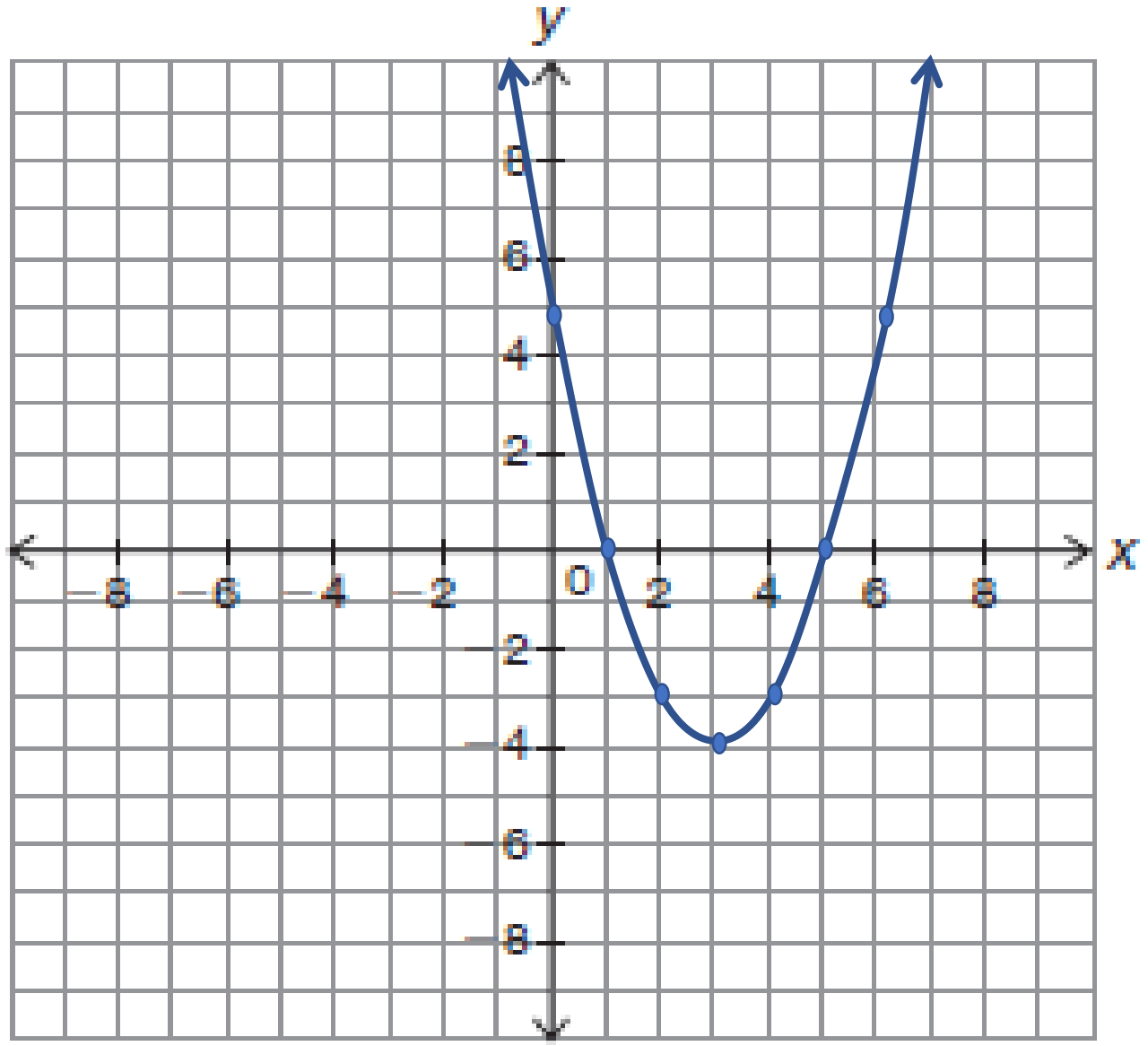
Does this Graph have a Max or Min Value? If so, at which point is it located?



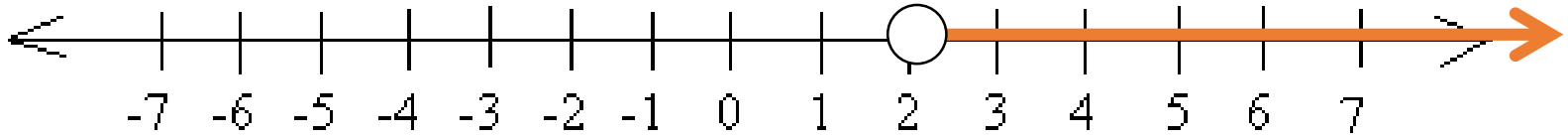
What are the Graph's Zeros? Hint: These are the x-intercepts!



What's the Graph's Y-intercept?



Write the following using Interval Notation:



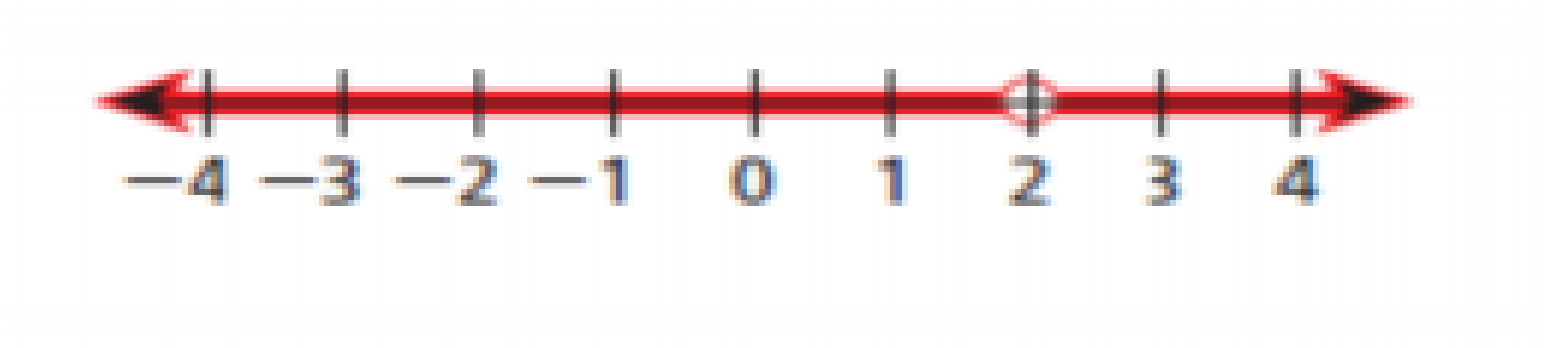
Write the following using Interval Notation:
(That's when you use the open/closed Parenthesis)

$$x > 6$$

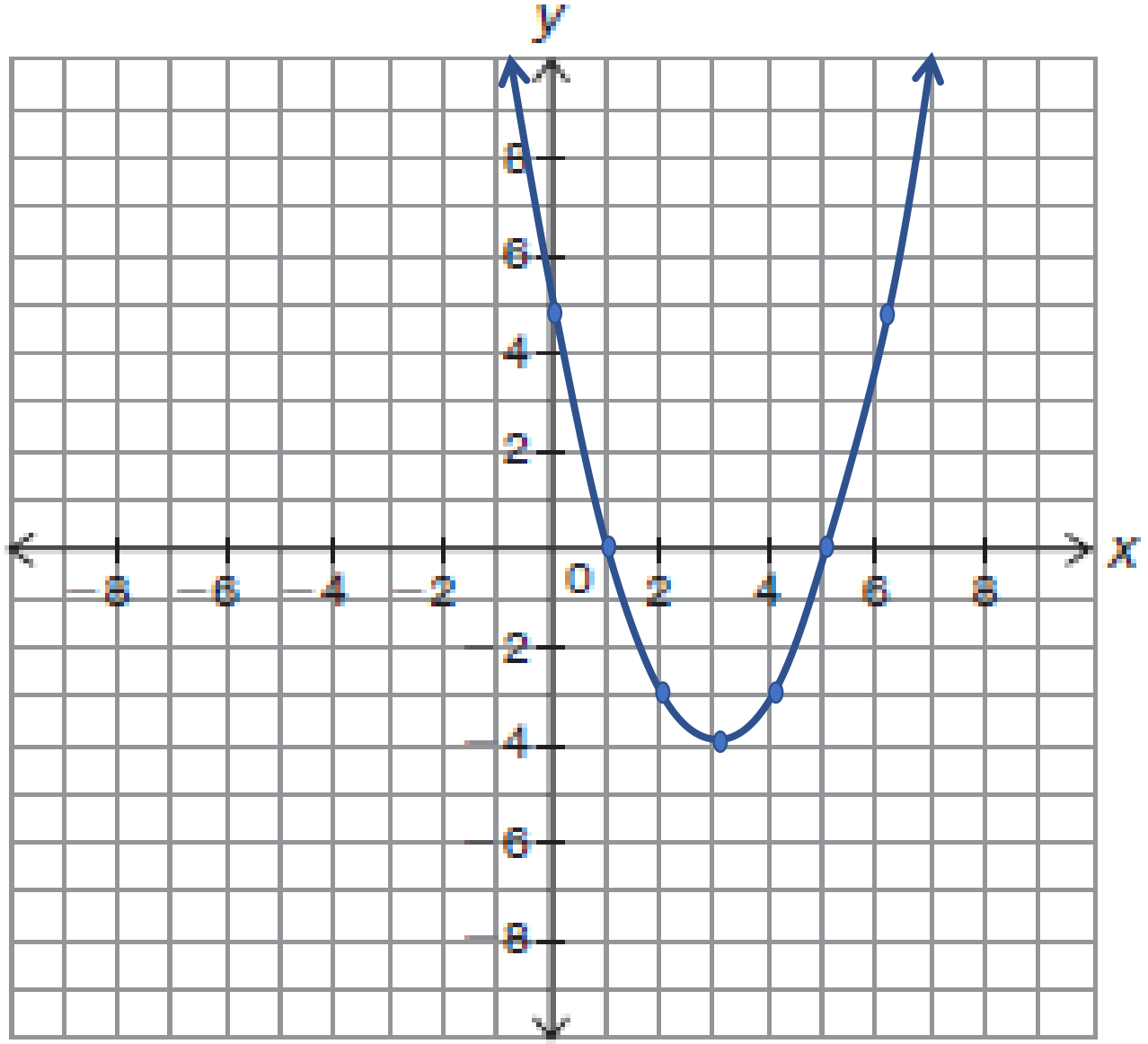
Write the following using Interval Notation:

$$x \leq 6$$

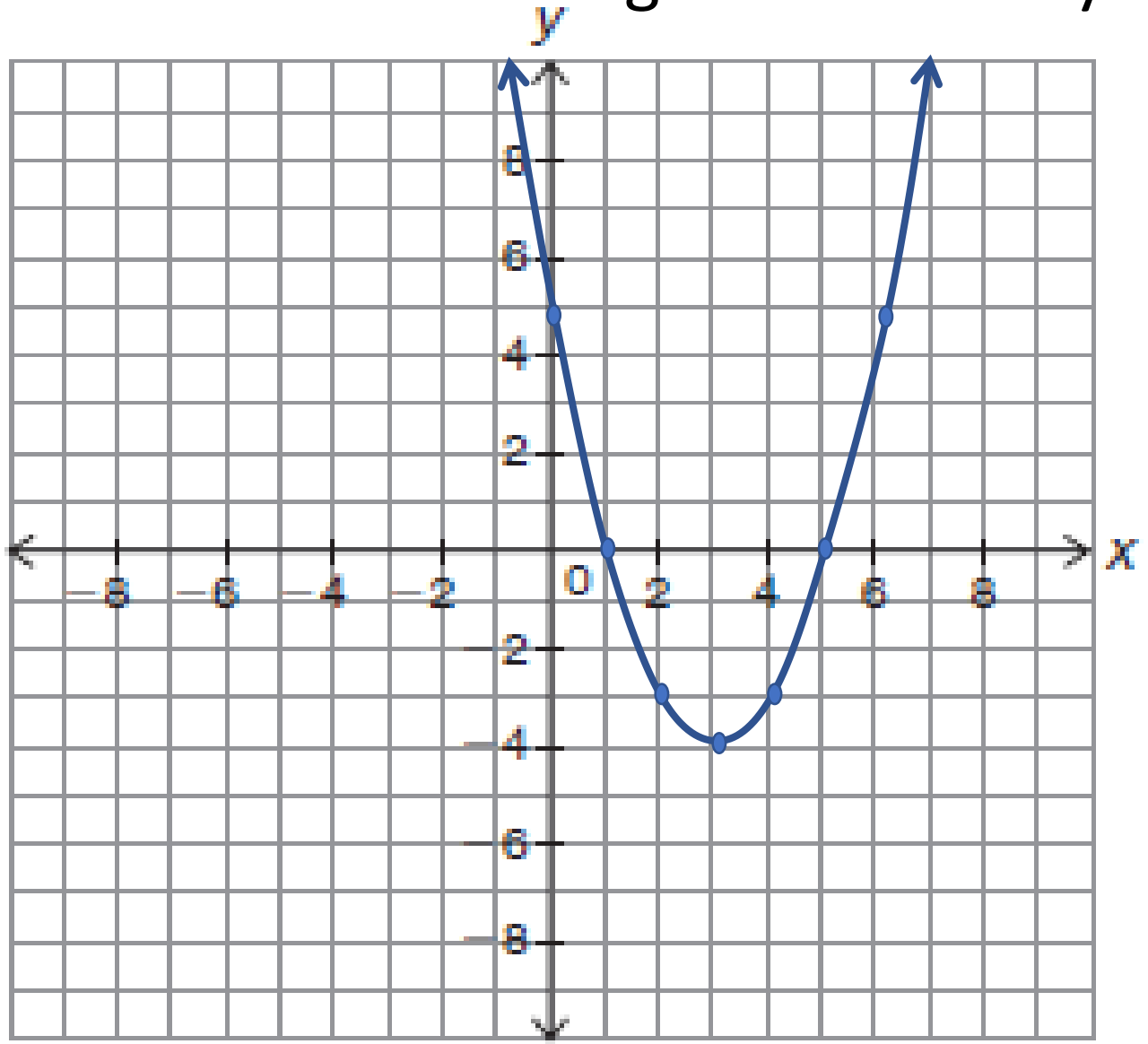
Write the following using Interval Notation:
(That's when you use the open/closed Parenthesis)



What's the Graph's Domain?
(Remember: The Domain is all of the x-values!)

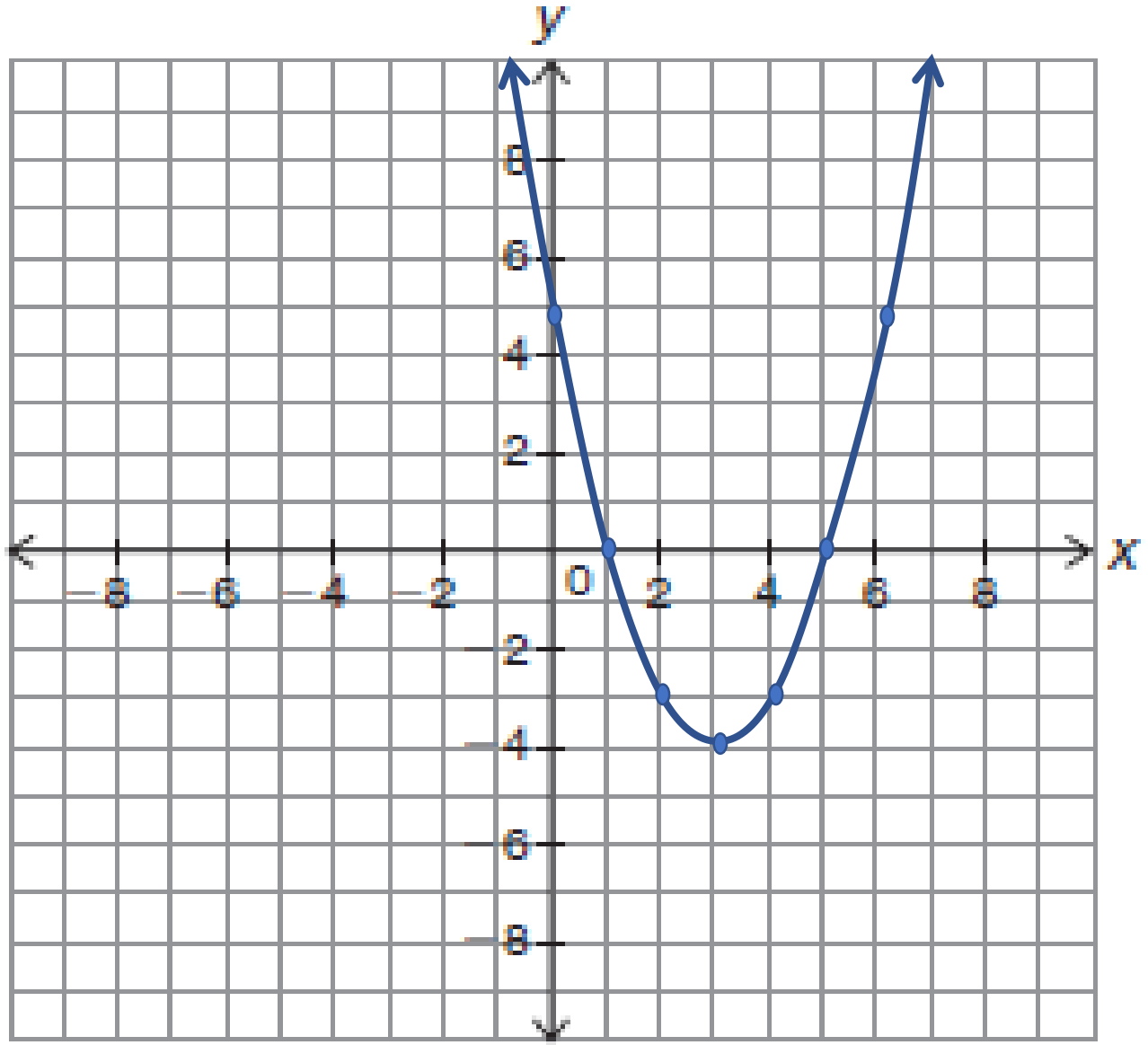


What's the Graph's Range?
(Remember: The Range is all of the y-values!)



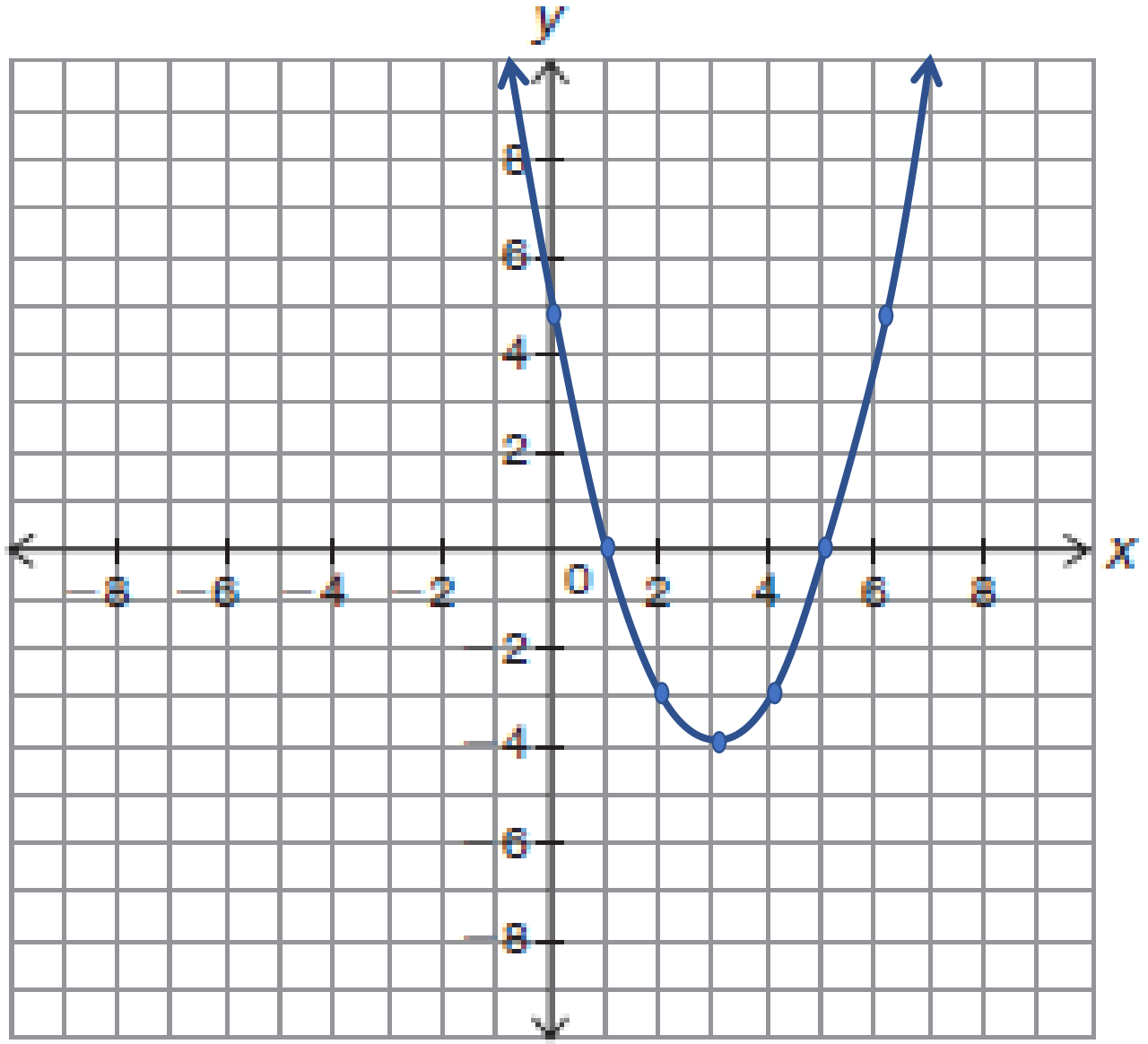
What's the interval of Increase?

(This must be written in Interval Notation, remember to only use the x-values!)



What's the interval of Decrease?

(This must be written in Interval Notation, remember to only use the x-values!)



Determine if the table is quadratic or linear using the first and second differences.

x	y	First Differences	Second Differences
0	2		
1	1		
2	0		
3	−1		
4	−2		

Determine if the table is quadratic or linear using the first and second differences.

x	y	First Differences	Second Differences
0	0		
1	−1		
2	2		
3	9		
4	20		

Write the Following in Standard Form:

$$f(x) = 2(6x - 3) + 3x^2$$

What are the values of a, b, and c in this Function?

$$f(x) = 3x^2 + 12x - 3$$

Find the y-intercept of this function

$$f(x) = 3x^2 + 12x - 3$$

Will this function open up or down?
(Hint: It's based off the value of a)

$$f(x) = 3x^2 + 12x - 3$$

Determine the Zeroes of the function in factored form:

$$f(x) = (x - 12)(x - 2)$$

Factor
(Hint: Use the GCF!)

$$f(x) = 2xy + 12x^2y^4 - 36x^{24}y^2$$

Multiply:

$$f(x) = (x - 3)(2x + 3)$$