

Preview for Ch 2**Slope of a line joining 2 points.**

Find the slope of the line passing through A(3,5)
and B(-7, -15)

Sep 21-10:16 AM

Finite differences:

X	Y
1	2
2	4
3	6
4	8

X	Y
1	3
2	12
3	27
4	48

Find the slope for the first table.

Sep 21-10:17 AM

Finding "zeros" for a function:

This means ind the value of x that makes $f(x)$ zero.

1/ $f(x) = 2x + 5$

2/ $f(x) = x^2 - 2x$

3/ $f(x) = x^2 - x - 20$

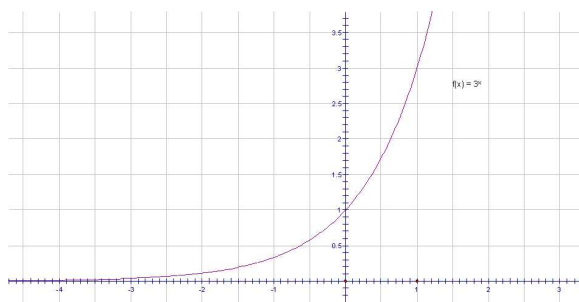
4/ $f(x) = 6x^2 - x - 12$

The degree of the function tells you how many zeros to look for.

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We often need to ind zeros for functions other than linear and quadratic...

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



Sep 21-10:24 AM

Finding max and min...

- for parabolas it is the vertex

-lines go infinitely in both directions, so no max or min.

-for sin/cos parent graphs have max=1, min=-1.

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To find the vertex...

-complete the square

or

-find the zeros, average the x-values, sub back in to find y.

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1/ Find the min:

$$y=2x^2-12x+22$$

2/ Find the max:

$$h(t)=-2.25t^2+4.5t+6.75$$

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3/ Find the max or min:

$$y=3x^2+4x-5$$

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Tomorrow... we will look at rates of change...

Slope for lines, but... what about a non-linear function?

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Homework

p66 #1,3,5,6

Sep 21-10:37 AM