Solving linear equations:

- 1. Simplify both sides
- 2. All variables to one side
- 3. Everything else to other side
- 4. Check
- `i=sqrt(-1)
- i²=-1
- i³=-i
- i4=1

To simplify higher powers of i, divide exponent by 4 (remainer=new exponent) sqrt(ab)=sqrt(a)*sqrt(b) sqrt(a/b)=sqrt(a)/sqrt(b)

Completing the square:

- 1. Move constant to right side
- 2. If lead. Coef. is not 1, divide through by lc
- Take ½ of Ic, square it, add to both sides
- 4. Factor left side, combine right side

 $a^{2}-b^{2}=(a-b)(a+b)$ $a^{2}+b^{2}=(a-bi)(a+bi)$ $x^{n/m}=msqrt(x^{n})$ Even root of both $(x^{n})^{m}=x^{nm}$

au²+bu+x=0 Abs val:

Isolate abs val on left
Right side neg, no sol
Separate into 2 eq'ns
(- cannot = #
[- can = #
Domain = x
Range = y
Function - every x has only one y
Where - x
What - y
Even vs odd functions

Even if f(-x)=f(x) Odd if -f(x)=f(x)

Slope-int is y=mx+b

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Avg rate of change as x goes from a to b =
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(f(b)-f(a))/(b-a)

 $f(x)=x^2$ parabola $f(x)=x^3$ up over up curvy thing f(x)=sqrt(x) half parabola thing f(x)=absval(x) v thing Parabola standard form: $y=a(x-h)^2+k$ Vertex: (h,k) Even degree -lc = down +lc = upOdd degree -lc = up to down+lc = down to up Multiplicity = power of factor Circle standard form: (x-h)²+(y-k)²=r² Center @ (h,k)ake s Live present, film Loone dividing voien begree less that Gyree of divisor Or a log,a=x 14 log MN=1 put in +/ Synthetic division: make sure at powers of variable are present, fill missing with 0; done dividing voen vogree of remainder is 1 SIO MN=log M+log N O. log_M/N=log_M-log_N Compound interest $A=P(1+r/n)^{nt}$ a=amount after t years p=amt invested r=rate of interest (decimal) n=periods/yr t=years Cont compounded interest A=Pe^{rt} Determinant AΒ CD = AD-CB