SOLVING EQUATIONS

QUADRATIC EQUATIONS

- No restrictions
- All terms on 1 side = 0.

factor — ex: $x^2 - 2x - 15 = 0$

Quadratic Formula — ex: $2x^2 - 5x - 3 = 0$

Perfect Square — ex: $16(x-3)^2 - 9 = 0$

LINEAR EQUATIONS

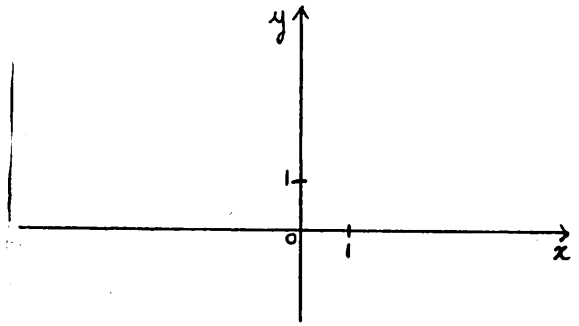
- no restrictions
- Isolate the variable.

ex: $4(x-1) = \frac{2}{3}(x+4)$

SOLVING GRAPHICALLY

- Graph each side of the equation
- Intersection points (x only)

ex: $\sqrt{x+4} = \frac{1}{x+4}$



ABSOLUTE VALUE EQUATIONS

- ⚠ 2 equations to solve
- ⚠ Tests are mandatory

ex: $|2x-5| = 5-3x$

RATIONAL EQUATIONS

- ⚠ Restrictions
- Write everything on the same denominator (and then "forget" about it)

ex: $\frac{3x}{x+2} - \frac{5}{x-3} = \frac{-25}{x^2-x-6}$

RADICAL EQUATIONS

- ⚠ Restrictions
- Isolate the square root and then square both sides
- ⚠ Tests mandatory

ex: $x - \sqrt{5-x} = -7$