C11 - 1.0 - Remember

Radicals: Laws

Exact Value (Algebra) OR
Decimal (Calculator)

Add/Subtract: Must have Same Index & Radicand!
Multiply/Divide: Must have Same Index*

$\sqrt{x+4} \neq \sqrt{x}+\sqrt{4}$ $\quad \sqrt{3^2+4^2} \neq 3+4=7$

$\sqrt{a^2+b^2} \neq a+b$ $\quad \sqrt{3^2+4^2}=\sqrt{25}=5$

FOIL a conjugate F & L (because O & I cancel)

Inequalities: Laws

$\sqrt{x^2} = |x| = \pm x$

$x^2 \geq 9$
$\sqrt{x^2} \geq \pm\sqrt{9}$
$x \geq +3 \quad x \leq -3$

$x^2 \leq 9$
$\sqrt{x^2} \leq \pm\sqrt{9}$
$x \leq +3 \quad x \geq -3$
$-3 \leq x \leq 3$

Quadratics $y = f(x)$

$x^2 = 9$
$x^2 - 9 = 0$
$(x-3)(x+3) = 0$
$x = 3 \;\; x = -3$

$x^2 = 9$
$\sqrt{x^2} = \pm\sqrt{9}$
$x = \pm 3$

$\pm$; *Plus/Minus*

Solving

$-a-b = -(a+b)$
$-a+b = -(a-b)$

$GCF = -1$

$(x+2)3 = 3x+6$ Back Distribution

Absolute Values
" + " *Case*
" − " *Case*
Piecewise

Reciprocals
VAs NPVs
Invariant points $(x, \pm 1)$

$x - int\ of\ original$

(Intersection of Original Graph-Line $y = \pm 1$)

Trigonometry

Degree Mode
Radian Mode

SOHCAHTOA
We only inverse $(+lengths) = \theta_r$
θ_r *is always positive, between* 0^o *and* 90^o
Substitution $m = 2x$
Calculator
Systems $y_1 = y_2$ *or* $y_1 \pm y_2 = 0$
"c" is the only angle in the cos law/

Rationals
Restrictions

Common Mistakes ***Corrections***

$\frac{4+3}{4} \neq 1+3=4$ $\quad \frac{4+3}{4} = \frac{4}{4}+\frac{3}{4} = 1.75$

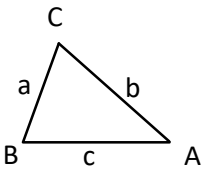
Separate/Add Fractions

$\frac{x+a}{x} \neq 1+a$ $\quad \frac{x+a}{x} = \frac{x}{x}+\frac{a}{x} = 1+\frac{a}{x}$

$\frac{1}{2}+\frac{x}{2} \neq 1+x$ $\quad \frac{1}{2}+\frac{x}{2}=\frac{3}{2}$ *Multiply by LCD*

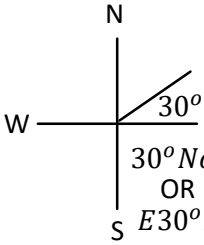
$-\frac{x+1}{2} = +\frac{-x-1}{2}$ $\quad \frac{a-1}{-1} = -a+1$

$GCF = -1$ /Distribution



$Area = \frac{1}{2}ab\ sinC$

Angle In-between Sides



$30^o NoE$ 30^o Towards North From East
OR
$E30^o N$ From East 30^o Towards North

Sequences Series
Blanks t_n, n, d, r
After!

$even = 2n$
$odd = 2n \pm 1$