Meet 1: Cheat Sheet

Event A:

LCM & GCM

If $a = 2 \cdot 3 \cdot 5$
$b = 2 \cdot 2 \cdot 3$

Then...
$LCM(a,b) = 2 \cdot 2 \cdot 3 \cdot 5$
$GCD(a,b) = 2 \cdot 3$

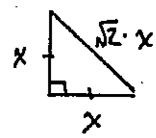
Repeating Fractions:

$0.252525\ldots = \frac{25}{99}$

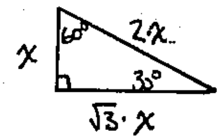
$0.123123123\ldots = \frac{123}{999} = \frac{41}{333}$

Event B:

45°-45°-90°

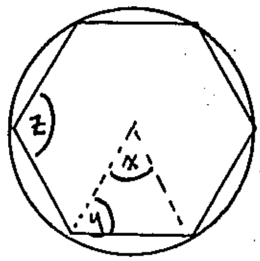


30°-60°-90°



Complement: Sum of Angles = 90°

Supplement: Sum of Angles = 180°



For a polygon w/ n-sides:

$x = \frac{360°}{n}$

$y = \frac{180° - x}{2}$

$z = 2y°$

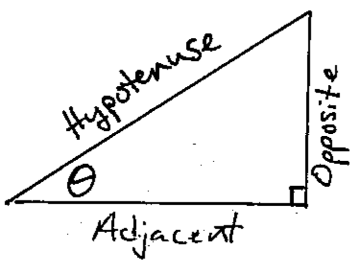
Event C:

SOH-CAH-TOA:

$\sin\Theta = \frac{\text{Opposite}}{\text{Hypotenuse}}$

$\cos\Theta = \frac{\text{Adjacent}}{\text{Hypotenuse}}$

$\tan\Theta = \frac{\text{Opposite}}{\text{Adjacent}}$



Reciprocals:

$\sec\Theta = \frac{1}{\cos\Theta}$

$\csc\Theta = \frac{1}{\sin\Theta}$

$\cot\Theta = \frac{1}{\tan\Theta}$

Ratios:

$\tan\Theta = \frac{\sin\Theta}{\cos\Theta}$

Convert:

$\Theta° = \frac{\pi}{180} \cdot \Theta$ Radians

Θ Radians $= \frac{180}{\pi} \cdot \Theta°$

See Mr. Thell for the Left Hand Trick.

You have to know how to find...

$\sin\frac{\pi}{4}$, $\sin\frac{\pi}{6}$, $\sin\frac{\pi}{3}$, $\sin\frac{\pi}{2}$

$\cos\frac{\pi}{4}$, $\cos\frac{\pi}{6}$, $\cos\frac{\pi}{3}$, $\cos\frac{\pi}{2}$, etc.

Event D:

The Quadratic Formula:

If $ax^2 + bx + c = 0$

Then $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Also, if $b^2 - 4ac = 0$, then there's only 1 unique solution

if $b^2 - 4ac > 0$, then there's 2 real solutions

if $b^2 - 4ac < 0$, then there's 2 Imaginary solutions

Polynomials: Coefficients vs. Roots

If $P(x) = ax^n + bx^{n-1} + cx^{n-2} + dx^{n-3} + \cdots + z$

Then, the sum of the roots

- Taken 1 at a time $= \frac{-b}{a}$
- Taken 2 at a time $= \frac{+c}{a}$
- Taken 3 at a time $= \frac{-d}{a}$

$\vdots$

- Taken all at once $= \frac{\pm z}{a}$ $\begin{cases} +, \text{if } n \text{ is even} \\ -, \text{if } n \text{ is odd} \end{cases}$