Section 1.2: Precalculus Review, part 1
Section 1.2.2 Lines

Definitions:
The **slope** of a line is given by $m =$

Equations of a Line:

Section 1.2.4 Unit Circle Trigonometry

Complete the following table of values:

θ-value	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$
$\sin(\theta)$					
$\cos(\theta)$					
$\tan(\theta)$					
$\cot(\theta)$					
$\sec(\theta)$					
$\csc(\theta)$					

Other ways to remember these exact trig values:

1. On your fingers!

2. The Unit Circle .

Example: Solve for x: $\sin(2x) = \cos(x)$

Section 1.2.5 Exponentials and Logarithms

Properties of Exponents:

$a^0 =$

$a^{-x} =$

$a^{m/n} =$

$a^x = a^y$ if and only if

$a^x \cdot a^y =$

$\dfrac{a^x}{a^y} =$

$(a^x)^y =$

$(ab)^x =$

$\left(\dfrac{a}{b}\right)^x =$

IMPORTANT!!! Does $(a+b)^x = a^x + b^x$?

Definition of a Logarithm (or "ln: WTF?")

A logarithm is just the opposite (inverse) of an exponential. This means that $y = \log_a x$ can be rewritten as

Similarly, $y = \ln x$ (or $\log_e x$) can be rewritten as

Properties of Logarithms

$\log_a(xy) =$

$\log_a\left(\dfrac{x}{y}\right) =$

$\log_a(x^c) =$

$\log_a(a^x) =$

$a^{\log_a x} =$

Examples:

1. Compute $\log_3 \dfrac{1}{27}$

2. Rewrite $\sqrt{x}$ using exponents.

3. Solve for x: $e^{2x} + 2xe^{2x} = 0$

4. Solve for x: $20 = 4(3^x)$