

Steve Mills

MAT 122 Trigonometry

MWF 8:10 - 9:00

EDBH 129

↳ From the
Greek "measure"
triangle"

Book: Larson Trigonometry
9th Ed.

\$265⁰⁰

For \$50, you can rent it
for 125 days.

Syllabus is on course website.

My Aims Login to My Courses

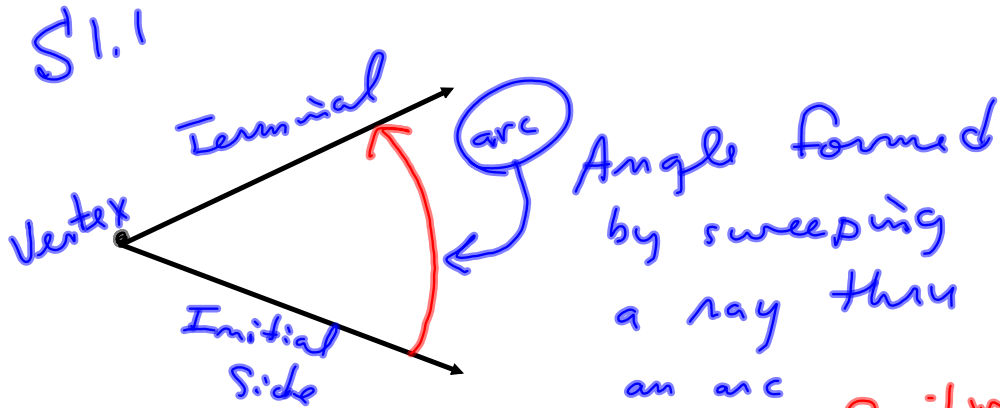
Aims Online
click on "Syllabus"

Three Categories: Tests (60%), Homework (20%), Final Test (20%).

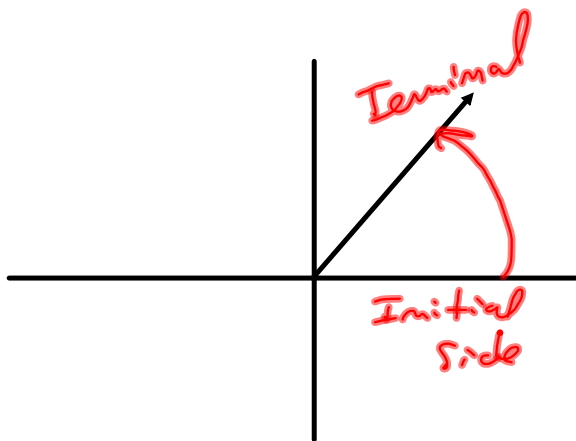
Test Average will count 60% of the final grade. (Replace the lowest of these with your Final Exam grade.)

Homework will count 20% of the final grade. Homework is assigned through Pearson Learning, and MyMathLab will deliver instruction, tutorials, and generate as many examples as you ask. This is a small fraction of the points, but the bread and butter of the course. It's where you *learn* this stuff.

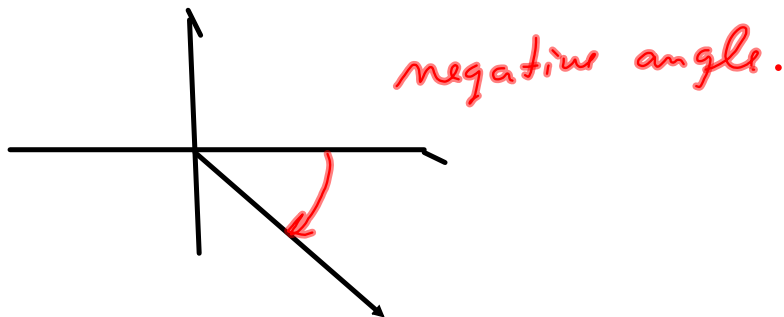
Final Test will count 20% of the final grade. FINAL TEST IS COMPREHENSIVE! THIS MEANS IT COVERS ALL TOPICS. I like to be able to give your Final Test a little more weight, if you do well on it. The only way I can justify this is if *everything* is fair game. If your Final is *worse* than your overall average, I'll count it 20%. But it might count more, if you do well on it. I like to leave some leeway for a student to demonstrate a strong understanding of the knowledge.

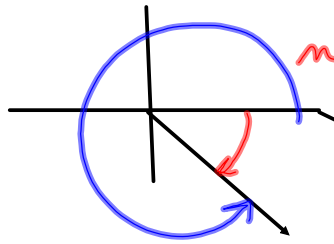


Standard Position
 Measure angle counterclockwise from positive x-axis: Positive



$$\begin{array}{r}
 2 \overline{) 360} \\
 \underline{2 180} \\
 2 \overline{) 90} \\
 \underline{3 45} \\
 3 \overline{) 15} \\
 \underline{3 15} \\
 0
 \end{array}$$





negative angle.

is coterminal
with a positive
angle

-45° & $+315^\circ$ put you
in the same spot.

Radians

Pg 123 book Def'n :

α = alpha

ω

β = beta

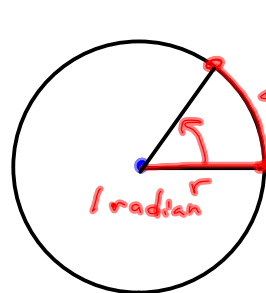
ω = omega

γ = gamma

Σ = sigma

One radian is the measure of a central angle θ that sweeps through an arc equal in length to the radius. (A piece of string wrapped around the circle.)

$\pi = \text{pi}$
"p"



$s = \text{arc length} = r$

There are 2π radians
to go around the
circle.

So how many radians to go
halfway around the circle?

$$1 \text{ radian} = \frac{s}{r}$$

If $s = r$, then $\frac{s}{r} = 1$, right?

Go 2 radius lengths, that's 2 radians
and an arc length of $2r$.

$$2 \text{ radians} = \frac{2r}{r} = 2$$

The ratio between arc length and
radius IS the radian measure

$$\frac{1}{2} \text{-circle} : 180^\circ = \frac{2\pi}{2} = \pi$$

$$\frac{1}{4} \text{-circle} : \frac{2\pi}{4} = \frac{\pi}{2} = 90^\circ$$

