Tips and Review

I General Tips

II Time and study advise

III Some review
Work the problems!
Come to Lectures!
Ask Questions
Get Involved

I just accidentally knocked your Ming dynasty vase off the mantel and broke it!

Just kidding! Ha! Ha! Ha! Ha! Ha! Ha!

It wasn't an accident.
Read the book

La liseuse, Pierre-August Renoir (1875)
Be Prepared
Discuss Material
Keep Notes
Group Collaboration
Live Beyond Classes
Timemanagement
Do Homework Early

Read the problem set through and start with the first problem.

Hard Work Often Pays Off After Time, But Laziness Always Pays Off Now
Catch Up

The sooner you fall behind, the more time you have to catch up.
See The Show
Practice Problem Solving
Learn to say NO.
Polya: “How to solve it”

- Understand the problem.
- Plan: Solve subproblems, connect to old problems
- Walk along plan while controlling each step
- Check the result. Result obvious? Method useful?

George Polya: (1887-1985)
Use Free CPU Cycles
I feel sleepy all the time. Is my clock broken?
A polynomial of degree $n$ has exactly $n$ roots $p(x) = 0$.

$$p(x) = a_0 + a_1 x + a_2 x^2 + \ldots + a_n x^n$$
Derivatives

\[ \frac{d}{dt} x(t) = F(x(t)) \]
Integration

\[ \frac{d}{dx} \int_a^x f(y) \, dy = f(x) \]

\[ \int \sin(x) \, dx = -\cos(x) \]

\[ \int \cos(x) \, dx = \sin(x) \]

\[ \int x^n \, dx = \frac{x^{n+1}}{n+1} \]
Series

\[ \sum_{k=0}^{\infty} a_n x^n \]

\[ \sum_{k=0}^{\infty} a_n \sin(nx) \]
Numbers

N, Z, Q, R, C
Geometry

\[(x-a)^2 + (y-b)^2 = r^2\]

\[a x + b y = d\]