

## Apply It.

### The Math behind SUPERCOMPUTING...

#### What is supercomputing?

Supercomputers perform long complicated programs, often based on mathematical models with many variables.

#### Uses and Applications:

Supercomputing can produce answers to the “what-ifs” of our world. For example, what would happen if an asteroid struck the earth at a certain angle in a certain place, etc.? We can use supercomputers to figure out things like the long-term patterns of diseases and to model bone structure and its response to a number of variables.

#### How it works:

Supercomputers are, for the most part, just what we call them—SUPER computers. These machines are capable of handling many variables and graphically representing the outcomes.

#### Interesting Fact:

Students at Virginia Tech constructed a supercomputer using 1100 Power Mac G5s. For something that usually costs \$100-250 million, and managed to create a viable and efficient example for about \$7 million... and it works!

