Let's look at solutions to the interclass problem.

Minute essay comments:
- Will there be a review before the test?
- Various decision questions.
- Flying pigs.
- Activities.
I want to have a function that tells me if two squares intersect.

The function will be given the x and y location of the center of each square as well as the length of the side of each square.

It should return a Boolean telling if they intersect.
We talked about comparisons of values in the last class.

We can also combine Boolean expressions together using Boolean logic.

There are four Boolean operators:

- `&&` for and
- `||` for inclusive or
- `^` for exclusive or
- `!` for not
Short Circuit Operators

- The && and || operators are short circuit operators.
- This means that if the value is known after evaluating the first operand, the second operand won't be evaluated.
- This can prevent errors.
- Let's look at an example of this with division by zero.
Nesting ifs

- What you put in an if can be any expression or statement.
- As a result, you can put an if inside of another if.
- As we will see, Scala doesn't care what you nest inside of things. You write the logic that makes sense to you and says what you want to say.
There is a second conditional expression in Scala called match.

```
expr match {
  case pattern => expr
  case pattern => expr
  ...
}
```

There are lots of options for the pattern, but the simplest one is literal values.
Now I want to start having us write some more significant code.

I want to write some functions that deal with 3-D geometry with the eventual goal of being able to do ray tracing.

What could we use to represent these in Scala?

- Vectors
- Points
- Spheres
- Planes
Minute Essay

- Is there anything you would like to see us code? What problems do you want to be able to solve on a computer?
- Interclass problem:
  - Write functions that do some operations to vectors that we didn't get to in class using tuples.