#### Haskell Lab 6





What is a mutant?

#### How can we mutate a Haskell function?

# What is the difference between properties and unit tests?

#### FitSpec

#### **MULTIPLICATION TABLE**

1 x 1 = 1 1 x 2 = 2 1 x 3 = 3 1 x 4 = 4 1 x 5 = 5 1 x 6 = 6 1 x 7 = 7 1 x 8 = 8 1 x 9 = 9 1 x 10 = 10	2 x 1 = 2 2 x 2 = 4 2 x 3 = 6 2 x 4 = 8 2 x 5 = 10 2 x 6 = 12 2 x 7 = 14 2 x 8 = 16 2 x 9 = 18 2 x 10 = 20	3 x 1 = 3 3 x 2 = 6 3 x 3 = 9 3 x 4 = 12 3 x 5 = 15 3 x 6 = 18 3 x 7 = 21 3 x 8 = 24 3 x 9 = 27 3 x 10 = 30	4 x 1 = 4 4 x 2 = 8 4 x 3 = 12 4 x 4 = 16 4 x 5 = 20 4 x 6 = 24 4 x 7 = 28 4 x 8 = 32 4 x 9 = 36 4 x 10 = 40	5 x 1 = 5 5 x 2 = 10 5 x 3 = 15 5 x 4 = 20 5 x 5 = 25 5 x 6 = 30 5 x 7 = 35 5 x 8 = 40 5 x 9 = 45 5 x 10 = 50
1 X 10 - 10	2 X 10 - 20	3 X 10 - 30	4 X 10 - 40	3 X 10 - 30
6 x 1 = 6 6 x 2 = 12 6 x 3 = 18 6 x 4 = 24 6 x 5 = 30 6 x 6 = 36 6 x 7 = 42 6 x 8 = 48 6 x 9 = 54	7 x 1 = 7 7 x 2 = 14 7 x 3 = 21 7 x 4 = 28 7 x 5 = 35 7 x 6 = 42 7 x 7 = 49 7 x 8 = 56 7 x 9 = 63	8 x 1 = 8 8 x 2 = 16 8 x 3 = 24 8 x 4 = 32 8 x 5 = 40 8 x 6 = 48 8 x 7 = 56 8 x 8 = 64 8 x 9 = 72	9 x 1 = 9 9 x 2 = 18 9 x 3 = 27 9 x 4 = 36 9 x 5 = 45 9 x 6 = 54 9 x 7 = 63 9 x 8 = 72 9 x 9 = 81	10 x 1 = 10 10 x 2 = 20 10 x 3 = 30 10 x 4 = 40 10 x 5 = 50 10 x 6 = 60 10 x 7 = 70 10 x 8 = 80 10 x 9 = 90
6 x 10 = 60	7 x 10 = 70	8 x 10 = 80	9 x 10 = 90	10 x 10 = 100

#### How can we mutate the output of the multiplication table?

# How can we determine whether a given mutant survives or dies?

# How can we calculate the minimal property subsets?

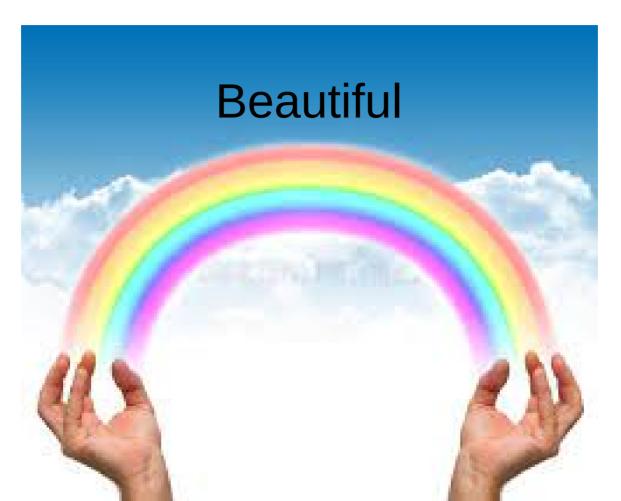
# How can we calculate the strength of a set of properties?

#### What types of conjectures are there?

# How can we calculate the conjectures?

# How can we calculate the conjectures?

#### The Bonus



#### That's it