

# A Little Bit of Unit Testing

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# Most Useful Function

```
assertEquals(expected, actual)
```

## how it works

```
if expected and actual are the same  
    test passes
```

```
else  
    test fails
```

- ▶ function defined for several different types
- ▶ expected, actual must be same type
- ▶ typical actual: call function to test

## Example

```
assertEquals(expected, actual)
```

```
void testSum() {  
    assertEquals(10, LamMath.sum(2,8));  
    assertEquals(-10, LamMath.sum(-2,-8));  
    assertEquals(-6, LamMath.sum(2,-8));  
    assertEquals(0, LamMath.sum(0,0));  
}
```

# For True/False Values

```
assertTrue(some boolean condition)
assertFalse(some boolean condition)
```

## Example

```
void testIsEven() {
    assertTrue(LameMath.isEven(2));
    assertTrue(LameMath.isEven(42));
    assertTrue(LameMath.isEven(-16));
    assertFalse(LameMath.isEven(-1));
    assertFalse(LameMath.isEven(11));
}
```

# JUnit in Eclipse

## To Add JUnit to Project

- ▶ Right click on a class (CTRL-click on a Mac)
- ▶ File → New → JUnit Test Case
- ▶ Be sure “New JUnit Jupiter test” is selected
- ▶ Click “Next”
- ▶ Check off functions you want tested, then click “Finish”

## To Run the Tests

- ▶ Right click on the test class (CTRL-click on a Mac)
- ▶ Run → Run as → JUnit Test