

Load SafeMath unit tests

Load the SafeMath_tests by running the command

```
remix.loadgist('6011784571f8d5e8fb39475248f86792')
```

Run SafeMath_test

- SafeMathTest contract creates SafeMathProxy contract and call SafeMath functions.
- If any call fails, it safely reverts

```
14 uint256 a = 4;
15 uint256 b = 2 ** 256 - 1;
16 return Assert.equal(
17     a * b,
18     2 ** 256 - 4,
19     "unsafe multiplication did not overflow"
20 );
21 }
22
23 function safeMultiplicationShouldRevert() public constant returns (bool) {
24     uint256 a = 4;
25     uint256 b = 2 ** 256 - 1;
26     return Assert.equal(
27         address(safemathproxy).call.gas(40000).value(0)("mulProxy",[a, b]),
28         false,
29         "safe multiplication did not revert"
30     );
31 }
32
33 function safeDivisionByZeroShouldRevert() public constant returns (bool) {
34     uint256 a = 4;
35     uint256 b = 0;
36     return Assert.equal(
37         address(safemathproxy).call.gas(40000).value(0)("divProxy", [a, b]),
38         false,
39         "safe division did not revert"
40     );
41 }
```

✓ gist/SafeMath_test.sol

Run Tests

gist/SafeMath_test.sol (SafeMathTest)

✓ (Unsafe multiplication should overflow)

✓ (Safe modulus should revert)

✓ (Safe subtract should revert)

✓ (Safe addition should revert)

✓ (Safe division by zero should revert)

✓ (Safe multiplication should revert)

✓ (Unsafe subtract should underflow)

✓ (Unsafe addition should overflow)

Debug SafeMath_test contract

- Deploy YourContractTest from run tab
- Debug using remix-debugger

1. Select SafeMathTest from contracts dropdown

2. Deploy contract

3. Click Debug button to debug this transaction using remix-debugger

