

Using JUnit: Test for Pirate class

PirateTest.java (test suite for Pirate class)

```
import org.junit.Test;
import static org.junit.Assert.*;

public class PirateTest
{
    public PirateTest()
    {
    }

    @Test
    public void testCreatePirate()
    {
        Pirate p = new Pirate("Davy Jones");
        assertEquals("Davy Jones", p.getName());
        assertEquals(4, p.getLimbsRemaining());
    }

    @Test
    public void testCreateOctopirate()
    {
        Pirate p = new Pirate("Octopus Pete", 8);
        assertEquals("Octopus Pete", p.getName());
        assertEquals(8, p.getLimbsRemaining());
    }

    @Test(expected = NullPointerException.class)
    public void testNullPirate()
    {
        Pirate p = null;
        p.loseALimb();
    }

    @Test
    public void testSetName()
    {
        Pirate p = new Pirate("Long John Silver");
        assertEquals("Long John Silver", p.getName());
        p.setName("Short John Gold");
        assertEquals("Short John Gold", p.getName());
    }

    @Test
    public void testLoseLimb()
    {
        Pirate p = new Pirate("Stubby Jones");
        assertEquals(4, p.getLimbsRemaining());
        p.loseALimb();
        assertEquals(3, p.getLimbsRemaining());
    }
}
```

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```

@Test
public void testIsDead()
{
    Pirate p = new Pirate("Unlucky Fred");
    assertFalse(p.isDead());
    p.loseALimb(); // Limb #1
    assertFalse(p.isDead());
    p.loseALimb(); // Limb #2
    assertFalse(p.isDead());
    p.loseALimb(); // Limb #3
    assertFalse(p.isDead());
    p.loseALimb(); // Limb #4 - uh oh
    assertTrue(p.isDead());
}

@Test
public void testNumPirates()
{
    int count = Pirate.getNumPirates();
    Pirate p1 = new Pirate("Ship's Mate #1");
    Pirate p2 = new Pirate("Ship's Mate #2");
    assertEquals(count + 2, Pirate.getNumPirates());
}

@Test
public void testTotalLimbsLost()
{
    int count = Pirate.getTotalLimbsLost();
    Pirate p1 = new Pirate("Stubby #1");
    Pirate p2 = new Pirate("Stubby #2");
    p1.loseALimb();
    p2.loseALimb();
    p2.loseALimb();
    assertEquals(count + 3, Pirate.getTotalLimbsLost());
}
}

```