## N-Body Gravity Simulation Evaluation

For all cases, the following values will be consistent:

```
Unset
val EPSILON = 10 // softening value to prevent division by 0
val G = 6.67e-11 // gravitational constant

val THETA = 1.0 // for barnes-hut only
```

The approach to evaluating and comparing between the performance of the naive algorithm (brute forced) and the barnes-hut + parallelization algorithm will be of the following:

| Cases | NUM_BODIES | BODY_MASS (units) | RADII (px) |
|-------|------------|-------------------|------------|
| 1 | 100 | 10e14 | (2, 4, 6) |
| 2 | 1,000 | 10e13 | (1, 2, 3) |
| 3 | 10,000 | 10e11 | (0.5, 1.0, 1.5) |
| 4 | 50,000 | 10e10 | (0.2, 0.4, 0.6) |
| 5 | 100,000 | 10e9 | (0.2, 0.4, 0.6) |