1. LOC: the number of lines of code, i.e. the simplest code metric

#MAE

```
mean(a)
[1] 0.4709659
mean(b)
[1] 0.3588186
mean(c)
[1] 0.3063282
mean(d)
[1] 0.7425622
mean(e)
[1] 0.2720818
```

#RCOR
```
mean(a)
[1] 0.4114367
> mean(b)
[1] 0.2698004
> mean(c)
[1] 0.2282088
> mean(d)
[1] 0.534041
> mean(e)
[1] 0.1201149
```

2. **NBF:** the number of bugs found previously, i.e. the simplest bug metric

#MAE

```
mean(a)
[1] 0.4044333
> mean(b)
[1] 0.3391792
> mean(c)
[1] 0.2853621
> mean(d)
[1] 0.7310873
> mean(e)
[1] 0.2102168
```

#RCOR

```
mean(a)
[1] 0.4560592
> mean(b)
[1] 0.2861149
> mean(c)
[1] 0.1267568
> mean(d)
[1] 0.5376222
> mean(e)
```

```
[1] 0.3459008
```

3. NOV: the number of versions of the source file, i.e. the simplest change metric

#MAE

```
mean(a)
[1] 0.4485697
> mean(b)
[1] 0.3665979
> mean(c)
[1] 0.2875233
> mean(d)
[1] 0.6563484
> mean(e)
[1] 0.2176579
```

#RCOR

```
mean(a)
[1] 0.4090047
> mean(b)
[1] 0.2511875
> mean(c)
[1] 0.1080683
> mean(d)
[1] 0.5646682
> mean(e)
[1] 0.2692775
```

4. The single code metric (and change metric) that have highest correlation

#MAE

```
mean(a)
[1] 0.4194877
> mean(b)
[1] 0.3137382
> mean(c)
[1] 0.2676531
> mean(d)
[1] 0.5968771
> mean(e)
[1] 0.1887126
```

#RCOR

```
mean(a)
[1] 0.4359852
> mean(b)
[1] 0.2645764
> mean(c)
[1] 0.2458112
> mean(d)
```

```
[1] 0.6288512
> mean(e)
[1] 0.2768462
```

5. All code metrics

#MAE

```
mean(a)
[1] 0.452847
> mean(b)
[1] 0.3282707
> mean(c)
[1] 0.2695302
> mean(d)
[1] 0.6244201
> mean(e)
[1] 0.2429479
```

#RCOR

```
mean(a)
[1] 0.4401249
> mean(b)
[1] 0.3036267
> mean(c)
[1] 0.3046922
> mean(d)
[1] 0.5173752
> mean(e)
[1] 0.180592
```

6. All change metrics

#MAE

```
mean(a)
[1] 0.438215
> mean(b)
[1] 0.3619797
> mean(c)
[1] 0.2931662
> mean(d)
[1] 0.6661316
> mean(e)
[1] 0.2047992
```

#RCOR

```
mean(a)
[1] 0.4465867
> mean(b)
[1] 0.2431231
> mean(c)
```

```
[1] 0.3325519
> mean(d)
[1] 0.528524
> mean(e)
[1] 0.2700853
```

---

7. All available metrics

#MAE

```
mean(a)
[1] 0.4438275
> mean(b)
[1] 0.3196719
> mean(c)
[1] 0.2903466
> mean(d)
[1] 0.6165689
> mean(e)
[1] 0.2082781
```

#RCOR

```
mean(a)
[1] 0.4382673
> mean(b)
[1] 0.3018521
> mean(c)
[1] 0.3700411
> mean(d)
[1] 0.515409
> mean(e)
[1] 0.2842893
```

---

9. Perform PCA for all metrics and only choose the first k principal components with cumulative variances of at least 90%

All metrics

JDT: #MAE
```
mean(pca.res)
[1] 0.4957408
```

         #RCOR
```
mean(pca.res)
[1] 0.4071479
```

PDE: #MAE
```
mean(pca.res)
[1] 0.3396786
```

         #RCOR
```
mean(pca.res)
[1] 0.230548
```

MYLYN: #MAE
         mean(pca.res)
         [1] 0.3044824

              #RCOR
         mean(pca.res)
         [1] 0.2036592

EQUINOX: #MAE
            mean(pca.res)
         [1] 0.7581227

              #RCOR
         mean(pca.res)
         [1] 0.5193088

LECENE: #MAE
            mean(pca.res)
         [1] 0.2096638

              #RCOR
         mean(pca.res)
         [1] 0.240149

All Change metrics

JDT: #MAE
           mean(pca.res)
         [1] 0.5028176

              #RCOR
          mean(pca.res)
         [1] 0.4013893

PDE: #MAE
           mean(pca.res)
         [1] 0.3365905

              #RCOR
          mean(pca.res)
         [1] 0.2690632

MYLYN: #MAE
           mean(pca.res)
         [1] 0.304854

              #RCOR
          mean(pca.res)
         [1] 0.146936

EQUINOX: #MAE
            mean(pca.res)
         [1] 0.7528714

```
#RCOR
mean(pca.res)
[1] 0.5588867
```

LECENE: #MAE
```
mean(pca.res)
[1] 0.1921056
```

```
#RCOR
mean(pca.res)
[1] 0.2544473
```

All Code metrics

JDT: #MAE
```
mean(pca.res)
[1] 0.5808303
```

```
#RCOR
mean(pca.res)
[1] 0.3241459
```

PDE: #MAE
```
mean(pca.res)
[1] 0.3229181
```

```
#RCOR
mean(pca.res)
[1] 0.3000617
```

MYLYN: #MAE
```
mean(pca.res)
[1] 0.306098
```

```
#RCOR
mean(pca.res)
[1] 0.2220147
```

EQUINOX: #MAE
```
mean(pca.res)
[1] 0.7542186
```

```
#RCOR
mean(pca.res)
[1] 0.5442499
```

LECENE: #MAE
```
mean(pca.res)
[1] 0.2426416
#RCOR
mean(pca.res)
[1] 0.1411097
```