

$$f_i = a (\text{Npart})^b + c$$

```
In[49]:= distr = {{10, 11}, {100, 32}, {250, 54}, {500, 79}, {750, 106},
                 {1000, 125}, {2500, 225}, {5000, 354}, {7500, 459}, {10000, 553}};
```

```
In[50]:= fn1 = a * Npart^b + c;
```

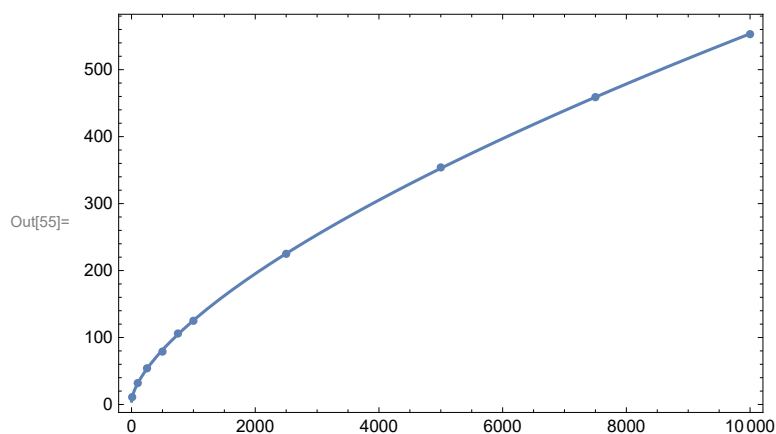
```
In[51]:= FindFit[distr, fn1, {a, b, c}, Npart]
```

```
Out[51]:= {a -> 1.28164, b -> 0.657873, c -> 4.96289}
```

```
In[54]:= fit1 = NonlinearModelFit[distr, fn1, {a, b, c}, Npart]; Normal[fit1]
```

```
Out[54]:= 4.96289 + 1.28164 Npart^0.657873
```

```
In[55]:= Show[ListPlot[distr], Plot[fit1[Npart], {Npart, 0, 10000}], Frame -> True]
```



$$\text{Error} = \frac{1}{n} \sum_{i=1}^n (f_i(i) - d(i))^2:$$

```
In[48]:= error1 = fit1["EstimatedVariance", VarianceEstimatorFunction -> (Mean[#^2] &) ]
```

```
Out[48]:= 1.10019
```