Sigma square = 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sample Size** | **Method** | **P(underestimation)** | **P(correct estimation)** | **P(overestimation)** |
| 5 | BIC | 0 | 0.45 | 0.55 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 15 | BIC | 0 | 0.94 | 0.06 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 25 | BIC | 0 | 0.98 | 0.02 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 50 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 100 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |

Sigma square =3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sample Size** | **Method** | **P(underestimation)** | **P(correct estimation)** | **P(overestimation)** |
| 5 | BIC | 0 | 0.38 | 0.62 |
| PAL | 0.07 | 0.91 | 0.02 |
| AIC | 0 | 0.01 | 0.99 |
| 15 | BIC | 0 | 0.93 | 0.07 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 25 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 50 | BIC | 0 | 0.99 | 0.01 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 100 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |

Sigma square =6

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sample Size** | **Method** | **P(underestimation)** | **P(correct estimation)** | **P(overestimation)** |
| 5 | BIC | 0.02 | 0.37 | 0.61 |
| PAL | 0.45 | 0.48 | 0.07 |
| AIC | 0 | 0 | 1 |
| 15 | BIC | 0 | 0.95 | 0.05 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 25 | BIC | 0 | 0.97 | 0.03 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 50 | BIC | 0 | 0.98 | 0.02 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 100 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |

Sigma square=9

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sample Size** | **Method** | **P(underestimation)** | **P(correct estimation)** | **P(overestimation)** |
| 5 | BIC | 0.07 | 0.39 | 0.54 |
| PAL | 0.69 | 0.27 | 0.04 |
| AIC | 0 | 0 | 1 |
| 15 | BIC | 0 | 0.92 | 0.08 |
| PAL | 0 | 0.98 | 0.02 |
| AIC | 0 | 0 | 1 |
| 25 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 50 | BIC | 0 | 0.98 | 0.02 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 100 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |

Sigma square= 15

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sample Size** | **Method** | **P(underestimation)** | **P(correct estimation)** | **P(overestimation)** |
| 5 | BIC | 0.35 | 0.25 | 0.4 |
| PAL | 0.91 | 0.06 | 0.03 |
| AIC | 0 | 0 | 1 |
| 15 | BIC | 0 | 0.94 | 0.06 |
| PAL | 0 | 0.98 | 0.02 |
| AIC | 0 | 0 | 1 |
| 25 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 50 | BIC | 0 | 0.99 | 0.01 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 100 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |

Sigma square=20

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sample Size** | **Method** | **P(underestimation)** | **P(correct estimation)** | **P(overestimation)** |
| 5 | BIC | 0.37 | 0.2 | 0.43 |
| PAL | 0.91 | 0.09 | 0 |
| AIC | 0 | 0 | 1 |
| 15 | BIC | 0 | 0.92 | 0.08 |
| PAL | 0 | 0.95 | 0.05 |
| AIC | 0 | 0 | 1 |
| 25 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 50 | BIC | 0 | 0.98 | 0.02 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 100 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |

Sigma square=30

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sample Size** | **Method** | **P(underestimation)** | **P(correct estimation)** | **P(overestimation)** |
| 5 | BIC | 0.41 | 0.15 | 0.44 |
| PAL | 0.95 | 0.04 | 0.01 |
| AIC | 0 | 0 | 1 |
| 15 | BIC | 0.02 | 0.91 | 0.07 |
| PAL | 0.09 | 0.83 | 0.08 |
| AIC | 0 | 0 | 1 |
| 25 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 50 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |
| 100 | BIC | 0 | 1 | 0 |
| PAL | 0 | 1 | 0 |
| AIC | 0 | 0 | 1 |