

(10 significant figures accuracy)

| n | n! | Stirling's approximation |
|----|---------------------|--------------------------|
| 10 | 3628800 | 3598695.626 |
| 11 | 39916800 | 39615625.12 |
| 12 | 479001600 | 475687487.6 |
| 13 | 6227020800 | 6187239490 |
| 14 | 87178291200 | 86661001970 |
| 15 | 1307674368000 | 1300430726000 |
| 16 | 20922789890000 | 20814114460000 |
| 17 | 355687428100000 | 353948329800000 |
| 18 | 6402373706000000 | 6372804647000000 |
| 19 | 121645100400000000 | 121112787000000000 |
| 20 | 2432902008000000000 | 2422786855000000000 |

| n | n! | Stirling's approximation |
|-----|-------------------------------|-------------------------------|
| 10 | 3628800 | 3598695.626 |
| 20 | $2.432902008 \times 10^{18}$ | $2.422786855 \times 10^{18}$ |
| 30 | $2.652528598 \times 10^{32}$ | $2.645170972 \times 10^{32}$ |
| 40 | $8.159152832 \times 10^{47}$ | $8.142172702 \times 10^{47}$ |
| 50 | $3.41409320 \times 10^{64}$ | $3.36344619 \times 10^{64}$ |
| 60 | $8.320987113 \times 10^{81}$ | $8.309438401 \times 10^{81}$ |
| 70 | $1.197857167 \times 10^{100}$ | $1.196432019 \times 10^{100}$ |
| 80 | $7.156945705 \times 10^{118}$ | $7.149494568 \times 10^{118}$ |
| 90 | $1.485715964 \times 10^{138}$ | $1.484340967 \times 10^{138}$ |
| 100 | $9.332621544 \times 10^{157}$ | $9.324847782 \times 10^{157}$ |