## Multiplication
### Log of average error for diffferent fixed point data widths

| Decimal width (bits) \ Integer width (bits) | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 |
|---|---|---|---|---|---|---|---|---|
| 8 | 5.69 | -3.77 | -3.76 | -3.76 | -3.77 | -3.76 | -3.76 | -3.76 |
| 16 | 5.69 | -9.28 | -9.29 | -9.29 | -9.29 | -9.29 | -9.29 | -9.28 |
| 24 | 5.71 | -14.83 | -14.83 | -14.84 | -14.83 | -14.83 | -14.83 | -14.83 |
| 32 | 5.74 | -20.37 | -20.37 | -20.38 | -20.38 | -20.37 | -20.38 | -20.37 |
| 40 | 5.73 | -25.93 | -25.92 | -25.92 | -25.92 | -25.92 | -25.92 | -25.92 |
| 48 | 5.75 | -30.83 | -30.80 | -30.84 | -30.84 | -30.84 | -30.86 | -30.85 |
| 56 | 5.74 | -30.96 | -30.97 | -31.05 | -30.98 | -30.98 | -30.97 | -30.98 |
| 64 | 5.69 | -31.00 | -31.01 | -30.92 | -30.99 | -31.04 | -30.96 | -30.98 |