Count digits in a factorial - Using Kamenetsky's formula

$$d(n!) = log10((n/e)^n * \sqrt{2 * pi * n})$$

$$d(n!) = log10((n/e)^n) + log10(\sqrt{2 * pi * n})$$

$$d(n!) = log10((n/e)^n) + (1/2) * log10(2 * pi * n)$$

$$d(n!) = log10((n/e)^n) + (log10(2 * pi * n))/2$$

It approximates the number of digits in a factorial by :
f(x) = log10(((n/e)^n) * sqrt(2*pi*n))

Thus, we can pretty easily use the property of logarithms to,
f(x) = n* log10((n/ e)) + log10(2*pi*n)/2