$$fbinomial := \text{binomial}(100, x) \cdot 0.5^{\cdot\cdot} x \cdot 0.5^{\cdot\cdot} (100 - x);$$

$$\text{binomial}(100, x)\ 0.5^{x}\ 0.5^{100 - x} \quad \textbf{(1)}$$

$$mean := 50.;\ \sigma := \text{sqrt}(100 \cdot 0.5 \cdot (1 - 0.5));$$

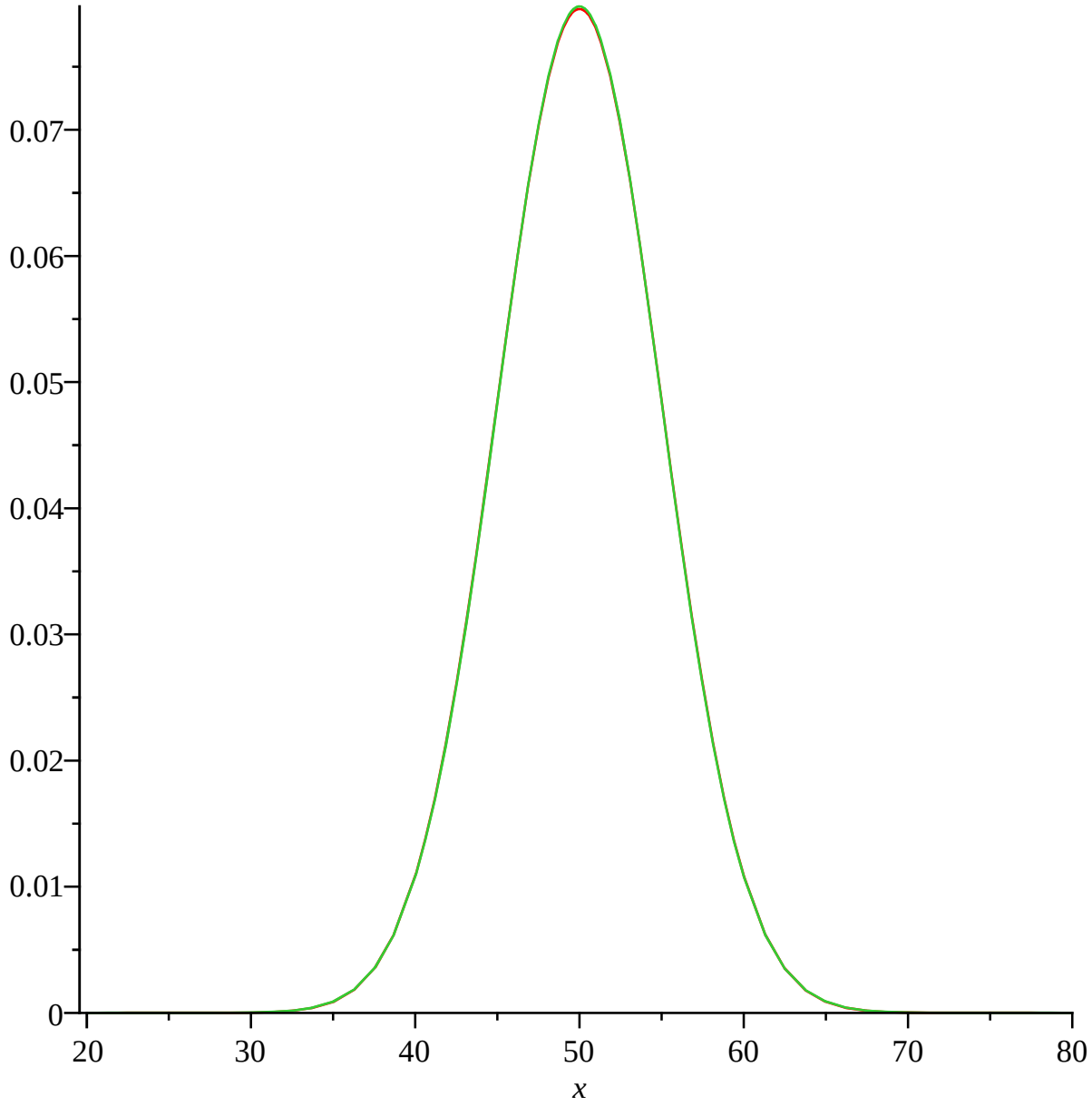
$$50.$$

$$5.000000000 \quad \textbf{(2)}$$

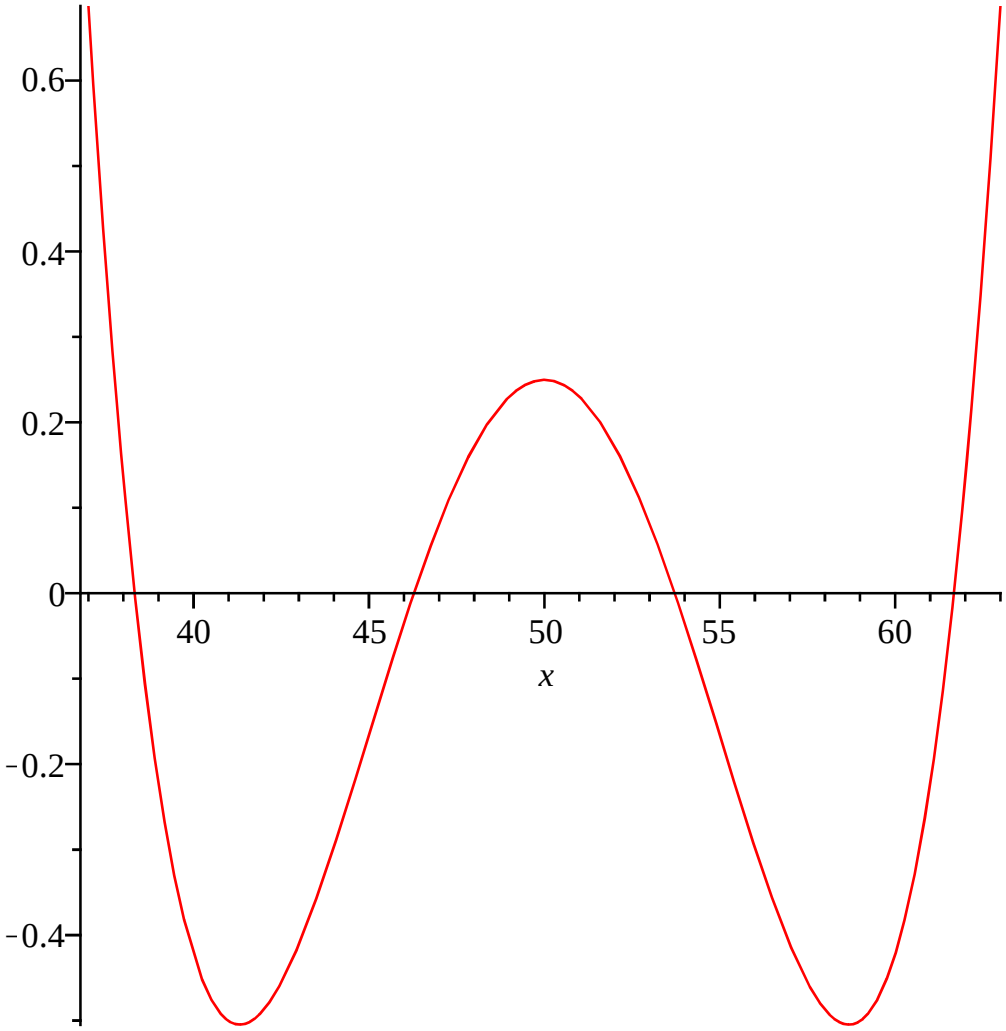
$$fgauss := \frac{\exp\left(- \frac{(x - mean)^{\cdot\cdot} 2}{2 \cdot \sigma^{\cdot\cdot} 2} \right)}{\text{sqrt}\left(2. \cdot evalf\left(\pi\right) \cdot \sigma^{\cdot\cdot} 2\right)};$$

$$0.07978845610\ e^{-0.02000000000\ (x - 50.)^2} \quad \textbf{(3)}$$

$$plot(\{fbinomial, fgauss\}, x = 20..80);$$



$$plot\left(\frac{(fgauss - fbinomial) \cdot 100}{fgauss}, x = 37..63 \right);$$


0.6
0.4
0.2
0
-0.2
-0.4
40
45
50
55
60
x