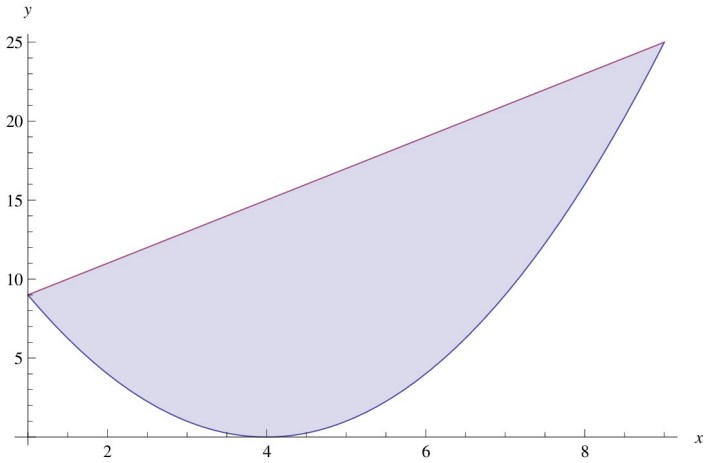
Answer on Question #48981 - Math - Integral Calculus



Let us find the points where two graphs intersect by solving $(x-4)^2=2x+7$. This quadratic equation has two solutions $x=1$, $x=9$ (which is also obvious from the picture).
Thus, the area between these two graphs is

$$S=\int_1^9\left((2x+7)-(x-4)^2\right)dx=\int_1^9(-9+10x-x^2)\,dx=\left(-9x+5x^2-\frac{x^3}{3}\right)\Big|_1^9=\frac{256}{3}\quad .$$