Mathematical Equations

Type the Given Mathematical equation with equation tool in MS Word

Script $(a + b)^4 = a^4 + 4a^3b + 6a^2b^2 + 4ab^3 + b^4$

Integral
$$g(x)y(x) = f(x) + \lambda \int_{-\infty}^{\infty} K(x,t)y(t)dt$$
$$\int (f(x) + g(x)) \, dx = \int f(x) \, dx + \int g(x) \, dx$$

Matrix
$$7x + 5y = 3 \atop 3x - 2y = 22 \quad \rightarrow \quad \begin{bmatrix} 7x + 5y \\ 3x - 2y \end{bmatrix} = \begin{bmatrix} 3 \\ 22 \end{bmatrix}$$

Root
$$a = \frac{b \pm \sqrt{(b^2 - 4ac)}}{2a}$$

Lim
$$\lim_{x \to 1} \frac{x^9 - 1}{x - 1} \Leftrightarrow \lim_{x \to a} \frac{f(x) - f(a)}{x - a}$$

Fraction
$$\frac{1}{(x-3)(x+1)} = \frac{1}{4(x-3)} + \frac{-1}{4(x+1)}$$

Trigonometry
$$\sin x + \sin y = 2 \sin \frac{x+y}{2} \cos \frac{x-y}{2}$$