$$a_0 = \frac{1}{\pi} \int_{-\pi}^{\pi} f(x)\,\mathrm{d}x$$

$$a_n = \frac{1}{\pi} \int_{-\pi}^{\pi} f(x)\cos nx\,\mathrm{d}x =$$

$$= \frac{1}{\pi} \int_{-\pi}^{\pi} x^2 \cos nx\,\mathrm{d}x$$

$$b_n = \frac{1}{\pi} \int_{-\pi}^{\pi} f(x)\sin nx\,\mathrm{d}x =$$

$$= \frac{1}{\pi} \int_{-\pi}^{\pi} x^2 \sin nx\,\mathrm{d}x$$