Answer on Question #80052 – Math – Calculus

Question

Find integrate $(\cos x - \cos 2x) \div (1 - \cos x)$ with respect to x

Solution

$$\int \frac{\cos x - \cos 2x}{1 - \cos x} dx = \int \frac{\cos x - 2\cos^2 x + 1}{1 - \cos x} dx =$$

$$= \int \frac{\cos x - 2\cos^2 x + 1 + \cos x - \cos x}{1 - \cos x} dx =$$

$$= \int \frac{2\cos x - 2\cos^2 x + 1 - \cos x}{1 - \cos x} dx =$$

$$= \int \frac{(2\cos x + 1)(1 - \cos x)}{1 - \cos x} dx =$$

$$= \int (2\cos x + 1) dx =$$

$$= 2\sin x + x + constant$$

Answer:

$$2\sin x + x + constant$$