Q1.

a) $\int_0^{\wedge} (x - [x])\, dx$

$[x]$ MEANS THE GREATEST INTEGER WHICH DOES NOT EXCEED x.

b) $\int_0^{n\pi} |\sin x|\, dx$

c) $\int_0^{2\pi} |\cos x - 1|\, dx$

Q2. SKETCH THE CURVE

$y = x^{\wedge} e^{-x}$ i) $\wedge$ IS EVEN ii) $\wedge$ IS ODD

Q3. PROVE THAT $\operatorname{cosec}\theta - \cot\theta = \tan\frac{1}{2}\theta$