1.
$$\lim_{x \to 0^+} (1+x)^{1/x} =$$

$$2. \qquad \int \left(8x^3 - \frac{1}{x^2} + x\right) \, dx =$$

$$3. \qquad \int \left(\pi \sin(x) + 4\right) dx =$$

$$4. \qquad \int \left(\sqrt[5]{x} + e^x\right) \, dx =$$

1.
$$\lim_{x \to 0^+} (1+x)^{1/x} =$$

2.
$$\int \left(10x^4 + 2x^2 - x + \frac{1}{x}\right) dx =$$

$$3. \qquad \int \left(1 + \sec^2(x)\right) dx =$$

$$4. \qquad \int \left(5e^x + \sqrt{x}\right) \, dx =$$