KIX 1001: ENGINEERING MATHEMATICS 1

Tutorial 8: Integration

1) Find

$$\int \ln(x^2 + 2)\, dx$$

2) Find

$$\int x^2 \ln x \, dx$$

3) Find

$$\int x^3 e^{x^2} \, dx$$

4) Find

$$\int \frac{(x+1)}{x^3 + x^2 - 6x}\, dx$$

5) Find

$$\int \frac{x^3 + x^2 + x + 2}{x^4 + 3x^2 + 2}\, dx$$

6) Find

$$\int \tan^3(3x)\sec^4(3x)\, dx$$

7) Find

$$\int \sin^4(x)\cos^7(x)\, dx$$

8) Find

$$\int \frac{dx}{x^2\sqrt{9 - x^2}}$$