

Name: _____
Spring 2018

MAT 296: HW 3
Due: 02/07

Problem 1: Integrate the following: $\int x^2 \sqrt{x-1} dx$

Problem 2: Integrate the following: $\int \frac{x-1-\sqrt{x}+\sqrt[3]{x}}{\sqrt{x}} dx$

Problem 3: Integrate the following: $\int \frac{dx}{9x^2 + 4}$

Problem 4: Integrate the following: $\int x^3 \sqrt[3]{2x^4 + 5} dx$

Problem 5: Integrate the following: $\int \sec \theta \tan^3 \theta \, d\theta$

Problem 6: Integrate the following: $\int e^{2x} \sin(2x) \, dx$

Problem 7: Integrate the following: $\int \cos \theta \ln(\sin \theta) d\theta$

Problem 8: Integrate the following: $\int 4x^3 \cos(3x) dx$

Problem 9: Find the area between $y = \sin x$, $y = \frac{4x}{\pi\sqrt{2}}$ in Quadrant I.