

Written HW6 – MATH 2502 Spring 2021

Due by 9 September for timely completion credit

1. Find the area bounded between the curves $y = \frac{1}{2x^2 + 3}$ and $y = \cosh(2x) - 1$ (recall $\int \cosh(x) dx = \sinh(x) + C$ and $\int \frac{1}{x^2 + 1} dx = \arctan(x) + C$). Include a picture of this region either sketched by hand or created using software. All calculations (except arithmetic and intersection point-finding) must be done “by hand”.
2. Find the area bounded by the curves $y = x^3 - 5x^2 + 6x$ and $y = x - 1$ (*note: this will include **two** bounded regions!*). Include a picture of this region either sketched by hand or created using software. All calculations (except arithmetic and intersection point-finding) must be done “by hand”.