

Final Exam Review Problems

§5.5: area between two curves

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- p. 384: 76

§6.2: integration by parts

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- p. 451: 29–31

§6.3: partial fractions

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- p. 451: 47

§6.6: improper integrals

- p. 453: 77, 79, 81–84

§8.5: trig integrals and trig substitution

- Evaluate the following integrals using a trig substitution.

(a) $\int \frac{1}{(9+x^2)^2} dx$

(c) $\int \frac{x^2}{(16-x^2)^{3/2}} dx$

(b) $\int \frac{7}{(1+4x^2)^2} dx$

(d) $\int \frac{x^2}{(1-9x^2)^{3/2}} dx$

§9.1: discrete probability

- pp. 647–648: 1–3, 15, 19

§9.2, 9.3: continuous probability

- p. 647: 22, 24
- p. 631: 17, 18, 20
- p. 649: 34, 35, 37, 39, 42, 43