

NAME: \_\_\_\_\_ ID: \_\_\_\_\_ Section: \_\_\_\_\_

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**Exercise 1** (4 points)

Evaluate  $\int \frac{\cos x dx}{\sqrt{|\sin^2(x) - 4|}}$ .

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**Exercise 2** (3 points)

Write  $\frac{x+1}{x^3 - x^2 + x - 1}$  in partial fractions.

**Exercise 3** (3 points)

Determine whether the improper integral  $\int_2^{\infty} \frac{x+1}{x^3 - x^2 + x - 1} dx$  is convergent or divergent.

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Write  $\frac{x+1}{x^3 - x^2 + x - 1}$  in partial fractions.

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Determine whether the improper integral  $\int_4^{\infty} \frac{x+1}{x^3 - x^2 + x - 1} dx$  is convergent or divergent