

Answer the questions in the spaces provided. If you run out of room for an answer, continue on the back of the page.

Name and section: _____

Instructor's name: _____

1. Compute the prime factorization of 59.

2. Find the derivative of

$$f(x) = \frac{1}{3}x^3 + 3x^2 - \frac{1}{4}x.$$

3. What is the determinant of

$$A = \begin{pmatrix} -1 & 29 & 0 \\ -1 & 0 & 0 \\ -42 & 3 & -3 \end{pmatrix}?$$