

Northern Michigan University (Marquette Co, MI)

MA111-04-26W: College Algebra (Andrew A. Poe)
Quiz 2

Name: _____
Friday 30 January 2026 2:00 P.M. EST

Time: 15 minutes

1. Compute the following product:

$$(3x - 2)(x + 1)(3x + 2)$$

$$\begin{array}{r} (3x-2)(3x+2)(x+1) \\ (9x^2-4)(x+1) \\ 9x^3 + 9x^2 - 4x - 4 \end{array}$$

$$\boxed{9x^3 + 9x^2 - 4x - 4}$$

2. Completely factor the following expression. For full credit, have no fractions in the answer:

$$4x^2 + 8x - 5$$

$$ac = -20 \quad b = 8$$

$$4\left(x - \frac{-10}{4}\right)\left(x - \frac{2}{4}\right)$$

$$4\left(x + \frac{5}{2}\right)\left(x - \frac{1}{2}\right)$$

$$2\left(x + \frac{5}{2}\right) 2\left(x - \frac{1}{2}\right)$$

$$\boxed{(2x+5)(2x-1)}$$

3. Simplify the following expression:

$$\frac{4x^2 - 100}{2x^2 - 16x + 30}$$

$$\frac{4(x^2 - 25)}{2(x^2 - 8x + 15)} = \frac{4(x+5)(x-5)}{2(x-3)(x-5)}$$

$$ac = 15 \quad b = -8$$

$$\boxed{\frac{2(x+5)}{x-3}}$$