

Name:

Quiz 1

1. Evaluate the following expressions. Do not use a calculator and show all your work.

(a) (3 points)  $2 \cdot (4 - 3 \cdot (5 - 1) \div 2)$

(b) (3 points)  $\frac{(6 + 2 \cdot 5)}{(2^4 - 2)} \cdot (3 \cdot 8 \div 2)$

2. Simplify the following expressions and write with only positive exponents.

(a) (5 points)  $\frac{(2 \cdot x^{-3} \cdot y^7)^2}{(4 \cdot x^{-4} \cdot y^3)}$

(b) (5 points)  $\frac{2a^3b^4 + 8b^2}{4a^2b} \div (5a^{-1}b^3)$

3. Factor the following expressions.

(a) (3 points)  $x^2 - 2x - 24$

(b) (3 points)  $4x^3 - 12x^2 + 8x$

4. (4 points) What are the roots the polynomials in the previous question.