

Name: _____ Section: _____

Problem 1. Perform the indicated operation and simplify (3 points).

$$5(3t - 4) - (t^2 + 2) - 2t(t - 3)$$

Problem 2. Simplify the following expression by multiplying the factors (3 points).

$$(\sqrt[3]{5} - 1)(\sqrt[3]{5^2} + \sqrt[3]{5} + 1)$$

Problem 3. Factor the expression completely (4 points).

$$\left(1 + \frac{1}{t}\right)^2 - \left(1 - \frac{1}{t}\right)^2$$