

YOUR NAME: _____

George Voutsadakis

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Rationalize the denominators and simplify:

(a) $\frac{3\sqrt{3}}{5\sqrt{6}} =$

(b) $\frac{3\sqrt{2} + \sqrt{5}}{\sqrt{2} - \sqrt{5}} =$

2. Solve the following equations:

(a) $\sqrt{x^2 + 2x - 6} = 3$

(b) $\sqrt{2x - 1} - 2x + 1 = 0.$

3. Solve the equation

$$(x - 1)^{-2/3} = \frac{1}{8}.$$