

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. Put an expression in place of the question mark that will make the two given expressions equal.

$$\frac{2}{x-1} = \frac{?}{1-x^2}$$

2. Perform the following operation and simplify:

(a)

$$\frac{4x-2}{x^2-5x} \div \frac{2x^2+9x-5}{x^2-25}$$

(b)

$$\frac{2x^2+7x-15}{4x^2-100} \cdot \frac{2x^2-9x-5}{4x^2-1}$$