

YOUR NAME: _____

George Voutsadakis

Read each problem **very carefully** before starting to solve it. Each problem is worth 10 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Solve the linear equation $\frac{x-2}{5} - \frac{x-3}{15} = \frac{2-x}{3}$.

2. A freight train takes 1 hour and 15 minutes to the city. A passenger train averaging 40 mph faster takes only 45 minutes to cover the same distance. What is the average speed of the passenger train?

3. Solve the absolute value inequality $|9 - 4x| \geq 3$ and graph the solution set.

4. Find an equation for the line ℓ that passes through $(-7, 5)$ and is perpendicular to the line ℓ' described by the equation $x + 2y = 20$.

5. Graph the solution set of the inequality $5x - y \leq 15$ in two variables.