

YOUR NAME: _____

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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. Solve the compound inequality and graph the solution set:

$$3 - 5(x - 3) \leq 8 \quad \text{and} \quad 2 \leq 4 - \frac{1}{2}(x - 8).$$

2. Solve the absolute value inequality and graph the solution set:

$$3|2 - 5x| - 12 \geq 18.$$

3. Alex is taking Biology 101 in which the final letter grade is assigned by giving 25% weights to each of two midterm exams and a 50% weight to the final exam. To get a C or better in the class, a student must have a weighted average of at least 70. If Alex got 59/100 in his first midterm and 71/100 in his second midterm exam, what grade should he get in the final to get at least a C in the course?

(a) Introduce a variable and state its meaning clearly.

(b) Write an inequality that reflects the statement in the problem.

(c) Solve the inequality to answer the question posed.