

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. For Leah's 21st birthday, her best friend, Rachel, took her out, first for dinner at Applebee's, and then for drinks at the Downtowner. Rachel's bill at the restaurant was \$5 more than twice her bill at the pub. Rachel left a 20% tip at Applebee's and a 15% tip at the Downtowner. If the total amount that Rachel spent for tips was \$12, how much was the girls' bill at the pub?

(a) Introduce variable(s) a state clearly what they represent.

(b) Write equation(s) reflecting the data and solve them to answer the question posed.

2. Solve the linear inequality $\frac{1}{3}x - \frac{1}{6} \leq \frac{1}{4}(x - 2)$. Express the solution set in interval notation and graph it.