

Purpose: This set of problem about inequalities will be used to practice our method of written homework in a (hopefully) familiar setting.

1. Solve the inequality

$$5 - 3x \leq 8 \text{ or } 2x + 1 > 7.$$

2. Solve the inequality

$$5 - 3x \leq 8 \text{ and } 2x + 1 > 7.$$

3. A long-distance telephone call using Northside Calling costs 20 cents for the first minute and 10 cents for each additional minute. The same call, using Westside Calling costs 14 cents for the first minute and 12 cents for each additional minute. For what length phone calls is Northside Calling cheaper?

4. A certain wireless phone company charges customers \$13.55 for monthly service, plus 2.2 cents per minute. Calls are free after the total monthly charges reach \$39.40. How long must a customer speak on the phone to reach the monthly maximum of \$39.40?