2.5 - Practice B

Solving Inequalities with Variables on Both Sides

Solve each inequality and graph the solutions.



Write and solve an inequality for each problem.

- 12. Ian wants to promote his band on the Internet. Site A offers website hosting for \$4.95 per month with a \$49.95 startup fee. Site B offers website hosting for \$9.95 per month with no startup fee. For how many months would lan need to keep the website for Site B to be less expensive than Site A?
- 13. For what values of x is the area of the rectangle greater than the perimeter?



Name	Date	Class
2.5 - Practice C		
Solving Inequalities v	with Variables on Both Sides	
Solve each inequality.		
1. $2x + 1 < 8x - 2$	2. $4(3p+5) \ge -2p$	$32s+3 \ge -7s$
4. $\frac{1}{2}(5-2x) > -x+1$	5. $5(n-2) < 4(2n+6) + 2$	6. $\frac{2}{3}y+6 < \frac{2}{3}y-6$
7. $\frac{3x}{8} + 4 \le 0.2x + 5$	8 <i>z</i> +20 > <i>z</i> +20	9. 2 <i>a</i> + 10 ≤ 2(−2 <i>a</i> + 3) + 6 <i>a</i>
10. $5b + 20 > -2 + 3b$	11. $6(k-5) > 3k-26$	12. 0.42 <i>d</i> < 152.5 + 0.17 <i>d</i>

For 13–17, use the table at right. The table gives the populations of Toledo, Ohio, and Lexington, Kentucky, during the last three U.S. Censuses.

	1980	1990	2000
Toledo, OH	350,000	330,000	310,000
Lexington, KY	200,000	230,000	260,000

- 13. About how much did the population of Toledo change each **year**? (Note: *Not* each decade!)
- 14. Write an expression for the population of Toledo any number of years after 1980.
- 15. About how much did the population of Lexington change each **year**?
- 16. Write an expression for the population of Lexington any number of years after 1980.
- 17. Assuming the patterns in the table continue, write and solve an inequality to find the years in which the population of Lexington will be greater than the population of Toledo.

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