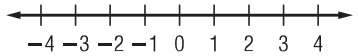
NAME _____ DATE _____ PERIOD _____

1-5 Practice

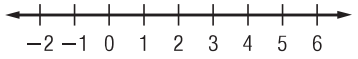
Solving Inequalities

Solve each inequality. Describe the solution set using set-builder or interval notation. Then, graph the solution set on a number line.

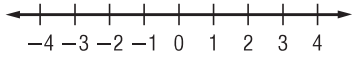
1. $8x - 6 \geq 10$



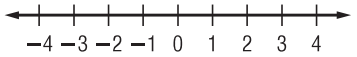
2. $23 - 4u < 11$



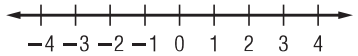
3. $-16 - 8r \geq 0$



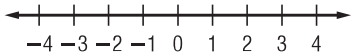
4. $14s < 9s + 5$



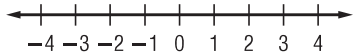
5. $9x - 11 > 6x - 9$



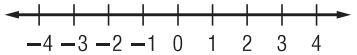
6. $-3(4w - 1) > 18$



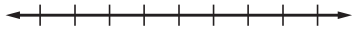
7. $1 - 8u \leq 3u - 10$



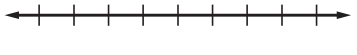
8. $17.5 < 19 - 2.5x$



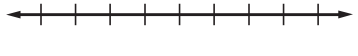
9. $9(2r - 5) - 3 < 7r - 4$



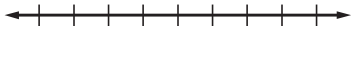
10. $1 + 5(x - 8) \leq 2 - (x + 5)$



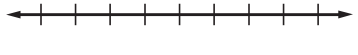
11. $\frac{4x - 3}{2} \geq -3.5$



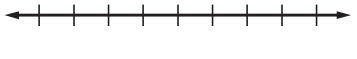
12. $q - 2(2 - q) \leq 0$



13. $-36 - 2(w + 77) > -4(2w + 52)$



14. $4n - 5(n - 3) > 3(n + 1) - 4$



Define a variable and write an inequality for each problem. Then solve.

15. Twenty less than a number is more than twice the same number.

16. Four times the sum of twice a number and −3 is less than 5.5 times that same number.

17. HOTELS The Lincoln's hotel room costs $90 a night. An additional 10% tax is added. Hotel parking is $12 per day. The Lincoln's expect to spend $30 in tips during their stay. Solve the inequality $90x + 90(0.1)x + 12x + 30 \leq 600$ to find how many nights the Lincoln's can stay at the hotel without exceeding total hotel costs of $600.

18. BANKING Jan's account balance is $3800. Of this, $750 is for rent. Jan wants to keep a balance of at least $500. Write and solve an inequality describing how much she can withdraw and still meet these conditions.