

**6.4 Notes: Linear Inequalities  
In One Variable**

**1-6 Solve and graph the solution set of each of the following:**

1)  $5x + 1 \leq 4(x + 3)$

2)  $2 - 4x < 6$

3)  $7(x + 3) - 3 > 4(2 - x) + x$

4)  $\frac{2}{5}x - \frac{7}{10} > \frac{9}{10}x - \frac{1}{5}$

5)  $-3 < 4x + 1 \leq 9$

6)  $20 \leq 5 - 5x < 40$

**7-11 Write an inequality then solve.**

7) A number increased by 10 is at least 3 times the number.

8) Twice the sum of five and a number is at most 24.

9) If the quotient of four times a number and three is increased by two, the result is no less than 10.

10) To earn a B in Year 4, you must have a final average of at least 80%. On the first three tests, you have grades of 82%, 74%, and 78%. If the final exam counts as two test grades, what must you get on the final to earn a B in the class? (Assume grades in Year 4 are based on tests only.)

11) A car can be rented from Hertz Rental for \$260 per week with no extra charge for mileage. Ovis charges \$80 per week plus 25 cents for each mile driven to rent the same car. How many miles must be driven in a week to make the rental cost at Hertz a better deal than at Ovis.