

8-7 Skills Practice: Solving Inequalities by Adding or Subtracting **Math8****1. Solve each inequality. Check your solution. (show your work)**

a. $p + 7 < 9$

b. $t + 6 > -3$

c. $-13 \geq 9 + b$

d. $16 > -11 + k$

e. $3 \geq -2 + y$

f. $25 < n + (-12)$

g. $r - 5 \leq 2$

h. $a - 6 < 13$

i. $j - 8 \leq -12$

j. $-8 > h - 1$

k. $22 > w - (-16)$

l. $-30 \leq d + (-5)$

m. $1 + y \leq 2.4$

n. $b - \frac{3}{4} < 2\frac{1}{2}$

o. $f - 4 \geq 1.4$

2. Write an inequality and solve each problem.**a.** Five less than a number is more than twenty.**b.** Four more than a number is no more than twelve.**c.** The sum of a number and 3.5 is at least 14.5.**d.** The difference of a number and -5 is less than 7.**e.** The sum of -12 and a number is at least 6.**f.** Eleven less than a number is more than fifteen.

3. Solve each inequality and check your solution. Then graph the solution on a number line.

a. $n + 4 < 9$



b. $t + 7 > 12$



c. $p + (-5) > -3$



d. $-13 \geq x - 8$



e. $-32 \geq a + (-5)$



f. $3 \leq \frac{1}{2} + m$



g. $4 \geq s - \frac{2}{3}$



h. $-\frac{3}{4} < w - 1$



4. David and Marsha are going to dinner and a movie this evening. David wants to have at least \$70 cash in his wallet. He currently has \$10. Write and solve an inequality to find how much cash David should withdraw from the bank.

5. The charter for the Spartan Club limits the membership to 85. Currently, the club has 47 members. Write and solve an inequality to find how many more members can be recruited.

6. Akira hopes that he will someday be more than 71 inches tall. He is currently 63 inches tall. Write and solve an inequality to find how much more Akira must grow to fulfill his wish.