

LESSON  
5.4**Practice C**

For use with the lesson "Solve Compound Inequalities"

**Solve the inequality. Graph your solution.**

1.  $-8 < -2x \leq 11$



2.  $9 < 3x + 12 < 33$



3.  $-24 < 2(2x - 3) \leq 32$



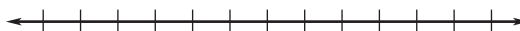
4.  $9 > \frac{3}{4}(8x - 12) > -15$



5.  $x + 14 < 5$  or  $-6x < -42$



6.  $-x - 2 > 1$  or  $2x + 3 \geq 11$



7.  $6x + 3 < 5x + 1$  or  $\frac{1}{3}x - 4 \geq -2$



8.  $2(4x + 5) < 5x - 2$  or  $\frac{1}{4}(x + 3) \geq 1$

**Write the verbal sentence as an inequality. Then solve the inequality and graph your solution.**

9. Three more than  $2x$  is greater than or equal to 1 and less than or equal to 11.



10. Three times the sum of  $x$  and 1 is less than 0 or the difference of  $x$  and 4 is greater than  $-3$ .



11. Six more than two times the sum of  $x$  and 1 is less than 0 or the difference of  $2x$  and 4 is greater than 8.



LESSON  
5.4**Practice C** *continued*  
For use with the lesson "Solve Compound Inequalities"**Solve the inequality, if possible. Graph your solution.**

12.  $2x - 1 > 3$  or  $3x + 5 \geq -4$



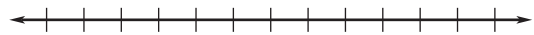
13.  $2x + 4 \geq 3$  and  $x + 4 > 9$



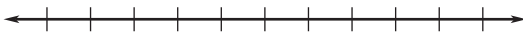
14.  $6 - x \leq 4$  and  $4x + 9 < -3$



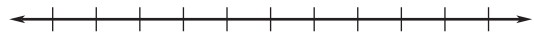
15.  $3x - 8 < 7$  and  $x + 7 < 3$



16.  $2(x + 1) < 0$  or  $3x - 5 > 4$



17.  $3x + 10 > -8$  and  $-4x + 10 > 2$



18.  $-1 \leq 2x + 7$  and  $3x + 5 \leq -7$



19.  $3x + 7 < 1$  or  $3x + 8 > 5$



20. **Long Jump** You have been keeping a record of all of the distances you have jumped in the long jump. The shortest distance you have ever jumped is 5 feet 3 inches. The longest distance you have ever jumped is 2.5 times the shortest distance. Write and graph a compound inequality that represents the possible distances you have jumped.



21. **Post Cards** The United States Postal Service requires that a post card not have dimensions greater than 4.25 inches by 6 inches and not have dimensions less than 3.5 inches by 5 inches.

- Write and graph a compound inequality that represents the possible areas of a post card. *Explain* how you got your answer.
- Give the dimensions of a post card that meets these requirements and does not have the dimensions already given. *Explain* how you got your answer.

22. **Basketball** You live 6.5 miles from the basketball courts and 2.25 miles from your friend's house. Write an inequality that represents the distance between the basketball courts and your friend's house. Write an inequality that represents the distance you travel if you go to your friend's house and then to the basketball courts.

