5 **Chapter 5 Test, Form 2C**

1. Solve $x - 12 > 1$. Then graph your solution on a number line.

1. $\underline{\{x\,|\,x > 13\}}$

9 10 11 12 13 14 15 16 17
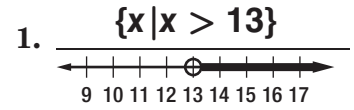
Solve each inequality.

2. $7 + z < 3$

2. $\underline{\{z\,|\,z < -4\}}$

3. $\dfrac{b}{8} > -\dfrac{1}{5}$

3. $\underline{\left\{b\,|\,b > -1\dfrac{3}{5}\right\}}$

4. $\dfrac{t}{6} \geq 14$

4. $\underline{\{t\,|\,t \geq 84\}}$

5. $-19.8 \geq 3.6y$

5. $\underline{\{y\,|\,y \leq -5.5\}}$

6. $-4r < 22$

6. $\underline{\{r\,|\,r > -5.5\}}$

7. $4x - 5 < 2x + 11$

7. $\underline{\{x\,|\,x < 8\}}$

8. $5(p + 2) - 2(p - 1) \geq 7p + 4$

8. $\underline{\{p\,|\,p \leq 2\}}$

9. $1.3(c - 4) \leq 2.6 + 0.7c$

9. $\underline{\{c\,|\,c \leq 13\}}$

Solve each compound inequality. Then graph the solution set.

10. $3w < 6$ and $-5 < w$

10. $\underline{\{w\,|\,-5 < w < 2\}}$

−6−5−4−3−2−1 0 1 2

11. $-4 \leq n$ or $3n + 1 < -2$

11. $\underline{\{x\,|\,x \text{ is a real number}\}}$

−4−3−2−1 0 1 2 3 4

12. $-4x - 8 \geq -4$ or $7x - 5 < 16$

12. $\underline{\{x\,|\,x < 3\}}$

−4−3−2−1 0 1 2 3 4
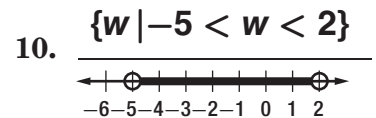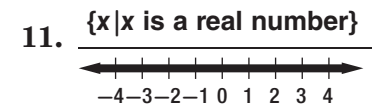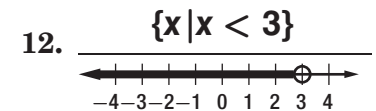
For Questions 13 and 14, solve each inequality. Then graph the solution set.

13. $|\,1 - x\,| \leq 2$

13. $\underline{\{x\,|\,-1 \leq x \leq 3\}}$

−4−3−2−1 0 1 2 3 4

14. $|\,3 - 2x\,| \geq 1$

14. $\underline{\{x\,|\,x \leq 1 \text{ or } x \geq 2\}}$

−4−3−2−1 0 1 2 3 4

Assessment
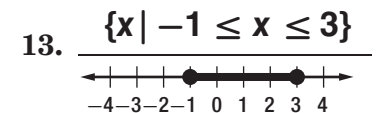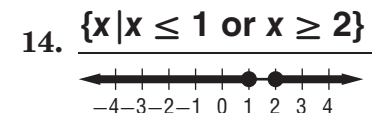
5   **Chapter 5 Test, Form 2C** *(continued)*

15. Solve $|8x + 2| < 14$.

15. $\underline{\{x \mid -2 < x < 1.5\}}$
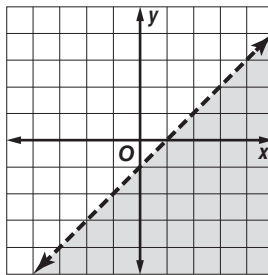
16. Ian has $6000. He wants to buy a car within $1500 of this amount. Define a variable, write an open sentence, and find the range of car prices.

Sample answer:
$x =$ car price;
$|6000 - x| \le 1500$;
$\{x \mid 4500 \le x \le 7500\}$; from
16. $6000 \le x \le 7500$; from $4500 to $7500

17. Graph $y > -\frac{1}{3}x + 2$.

17.

18. Use a graph to solve $2x - 3y \le 6$.

18.

19. What inequality has the solution set shown in the graph?

19. $\underline{y < x - 1}$

20. EXPENSES Camille has no more than $20.00 to spend each week for lunch and bus fare. Lunch costs $3.00 each day, and bus fare is $0.75 each ride. Write an inequality for this situation. Can Camille buy lunch 5 times and ride the bus 8 times in one week?
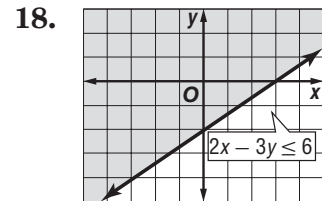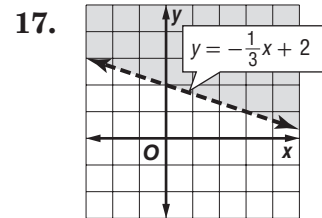
20. $3x + 0.75y \le 20$; No, the cost would be more than $20.00.

Bonus Graph the solution set of the compound inequality
$3 < |x - 4| < 7$.

B:

-3   1   7   11