

Homework Packet for Mrs. Duffey 8th Grade Math

Math 8	Skills Practice 8-1	Skills Practice 8-2	Skills Practice 8-3	Skills Practice 8-4	Skills Practice 8-5	Skills Practice 8-6
Mrs. Duffey						

Total Points Received	
Total Points Available	

Student Name: _____

Hour: _____

To access the on-line textbook resources:

1. Go to <http://prealg.com>
2. Select Student/Parent Center.

8-1 Skills Practice***Solving Equations with Variables on Each Side***

Solve each equation. Check your solution.

- | | |
|---------------------------|--------------------------|
| 1. $3x + 2 = 5x$ | 2. $n - 12 = 3n$ |
| 3. $2 - 3b = 7b + 12$ | 4. $4d - 11 = 2d + 7$ |
| 5. $2f + 3 = 11f - 24$ | 6. $8y + 11 = 2y + 29$ |
| 7. $5a = 45 + 2a$ | 8. $17 - 3c = 4c + 3$ |
| 9. $2a - 3 = 9a - 10$ | 10. $5b = 21 + 4b$ |
| 11. $9y - 27 = -2y + 6$ | 12. $2n - 5 = 7n$ |
| 13. $-s + 3 = 5s + 21$ | 14. $7 - 4c = 3c + 35$ |
| 15. $30 - 2n = 4n$ | 16. $29 + 7d = 5d + 15$ |
| 17. $16k - 23 = 6k - 13$ | 18. $w - 20 = 6w$ |
| 19. $33g + 28 = 25g - 12$ | 20. $6h - 34 = -6h + 14$ |
| 21. $3t + 17 = t - 3$ | 22. $11j = 6j - 15$ |
| 23. $c - 2 = 3c + 14$ | 24. $28x - 7 = 26x + 5$ |
| 25. $5m - 6 = 8m + 9$ | 26. $-4p - 7 = 5p + 11$ |
| 27. $-10 + 3f = 5f + 6$ | 28. $4f + 6 = 8f - 14$ |
| 29. $-7n - 16 = 4n + 17$ | 30. $5d = 9d - 18$ |

Define a variable and write an equation to find each number. Then solve.

31. Three times a number equals 40 more than five times the number. What is the number?
32. A number equals four less than three times the number. What is the number?
33. Eight times a number equals 24 more than two times the number. What is the number?

8-2**Skills Practice*****Solving Equations with Grouping Symbols*****Solve each equation. Check your solution.**

1. $2(g - 7) = 16$

2. $5(x + 2) = 30$

3. $3(2d + 7) = 39$

4. $4(a - 2) = 3(a + 4)$

5. $3(f + 2) + 9 = 13 + 5f$

6. $2(x - 4) = 3(1 + x)$

7. $2n + 5 = 4(n + 2) - n$

8. $4(x + 3) = x$

9. $2(c - 3) = 76$

10. $7(x - 2) = 5(x + 2)$

11. $2(6x + 1) = 4(x - 5) - 2$

12. $4(2b - 6) + 11 = 8b - 13$

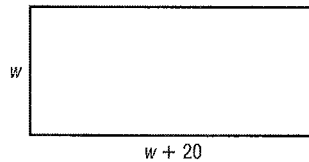
13. $6 + 6(2t - 1) = 3 + 12t$

14. $9t - 21 = 3(t - 7) + 6t$

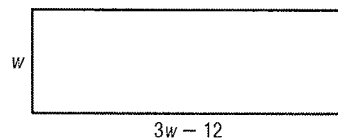
15. $3(4k + 14) = 10k - 2(k - 7)$

Find the dimensions of each rectangle. The perimeter is given.

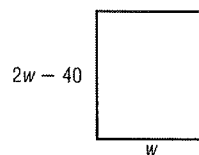
16. $P = 380$ m



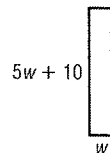
17. $P = 640$ yd



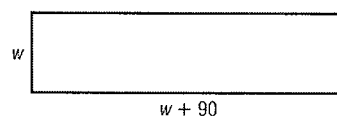
18. $P = 220$ ft



19. $P = 380$ yd



20. $P = 300$ m



8-3 Skills Practice

Inequalities

Write an inequality for each sentence.

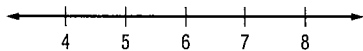
- More than 100,000 fans attended the opening football game at The Ohio State University.
- Her earnings at \$16 per hour were no more than \$96.
- A savings account decreased by \$50 is now less than \$740.
- A number increased by 7 is at least 45.

For the given value, state whether each inequality is true or false.

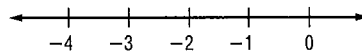
- $\frac{18}{c} < 9$, $c = 2$
- $\frac{x}{5} \geq 3$, $x = 5$
- $6k \geq 42$, $k = 7$
- $10 - x < 3$, $x = 7$
- $11 + n < 32$, $n = 4$
- $9 + c > 19$, $c = 10$

Graph each inequality on a number line.

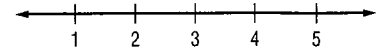
11. $a < 6$



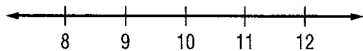
12. $t \geq -2$



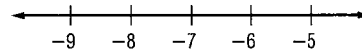
13. $d \leq 3$



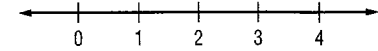
14. $b \geq 10$



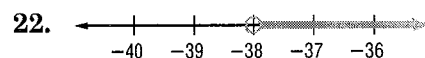
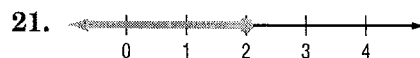
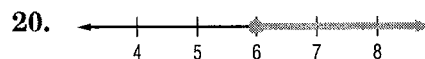
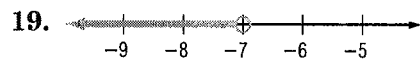
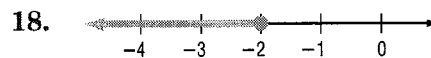
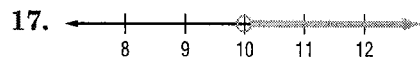
15. $x \geq -7$



16. $x > 2$



Write the inequality for each graph.



8-4**Skills Practice*****Solving Inequalities by Adding or Subtracting*****Solve each inequality. Check your solution.**

1. $p + 9 > 13$

2. $t + 7 < -4$

3. $-12 \geq 7 + x$

4. $f + (-7) \leq 9$

5. $5 > -3 + y$

6. $r + 7 \leq -3$

7. $b - 15 > 11$

8. $z + (-4) < -8$

9. $j - 4 \leq -10$

10. $-5 > h - 3$

11. $13 > w - (-14)$

12. $g - 7 > -4$

13. $-15 \leq d + (-2)$

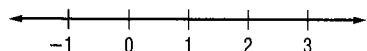
14. $2 + c \leq -8$

15. $15 > c + 3$

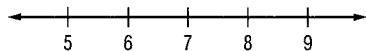
16. $j + 9 \leq -10$

Solve each inequality. Then graph the solution on a number line.

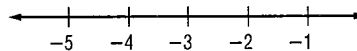
17. $n + 6 < 7$



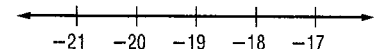
18. $-4 + z \geq 3$



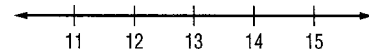
19. $p + (-3) > -6$



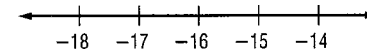
20. $-11 \geq x + 8$



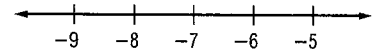
21. $15 \leq m - (-2)$



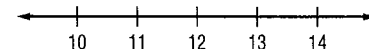
22. $k + 7 \geq -9$



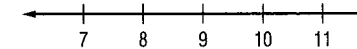
23. $-5 < 2 + a$



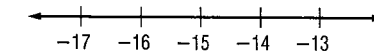
24. $t - 7 > 5$



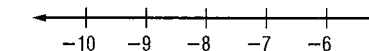
25. $-2 + z \geq 7$



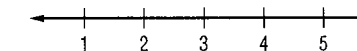
26. $p - (-7) > -8$



27. $-6 \leq m + 2$



28. $-2 < w - 5$

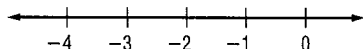


- 29. SHOPPING** Chantal would like to buy a new pair of running shoes. Shoes that she likes start at \$85. If she has already saved \$62, what is the least amount she must still save?

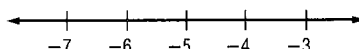
8-5 Skills Practice***Solving Inequalities by Multiplying or Dividing***

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

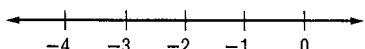
1. $-8x > 16$



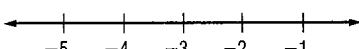
2. $7y < -35$



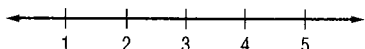
3. $12a \geq -24$



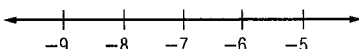
4. $-12 \leq 4a$



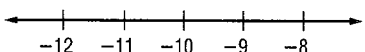
5. $-6z < -18$



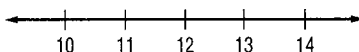
6. $14 > -2k$



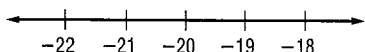
7. $5 > \frac{x}{-2}$



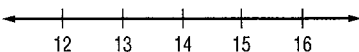
8. $\frac{r}{-3} \leq -4$



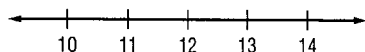
9. $-10t \geq 200$



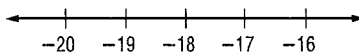
10. $\frac{y}{7} < 2$



11. $\frac{-1}{2}x \leq -6$



12. $\frac{b}{-3} \leq 6$



- 13. TRAVEL** To get to the beach for vacation, Cheng's family must drive at least 660 miles on the first day. They are traveling at a constant speed of 60 miles per hour.

a. Write an inequality to represent how long the family should drive on the first day.

b. How many hours should the family drive?

- 14. EARNINGS** Jess receives \$180 for every garage he paints over the summer. He wants to save at least \$1620 for college.

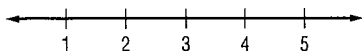
a. Write an inequality to represent how many garages Jess should paint over the summer.

b. How many garages should Jess paint?

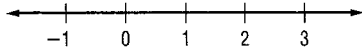
8-6**Skills Practice****Solving Multi-Step Inequalities**

Solve each inequality and check your solution. Graph the solution on a number line.

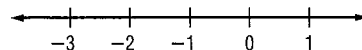
1. $3x + 9 < 18$



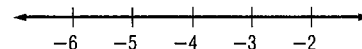
3. $4x - 3 < 2 - x$



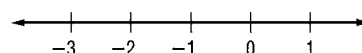
5. $11 + 2b \leq 3(2 - b)$



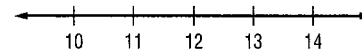
7. $\frac{1}{2}(8 - x) > 6$



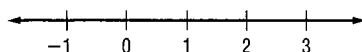
9. $y - 3 < 5y + 1$



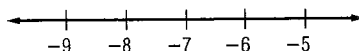
11. $\frac{1}{3}(x - 6) < 2$



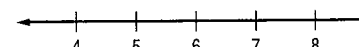
13. $-2(3 + t) < -8$



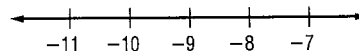
2. $5 + 2c < -9$



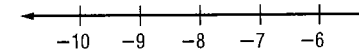
4. $3(n + 2) < 24$



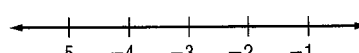
6. $\frac{m}{3} + 5 \geq 2$



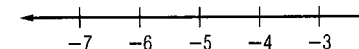
8. $\frac{c}{4} + 7 \geq 5$



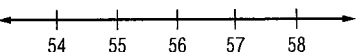
10. $20 - 2n > 26$



12. $5 - 2k \leq 15$



14. $\frac{n}{4} - 9 > 5$



15. Two times a number less 4 is greater than the same number plus 6. For what number or numbers is this true?

16. One-half of the sum of a number and 4 is less than 14. What is the number?

17. **FISHING** Benjamin wants to go fishing on the lake. A boat rents for \$12 per hour and a rod and reel rent for \$20 per day. If he wants to spend no more than \$80, how many hours can he spend fishing in the boat?18. **ENTERTAINING** Deena is inviting 10 friends to a party. If she wants to spend no more than \$120 on her guests, and dinner for each guest costs \$8, what is the most she can spend on party favors for each person?