Name_____

Solving Inequalities Using More Than One Step

1. $7a - 5 < 9$

2. $6 - 11b \leq -3$

3. $15 < 5 - 8c$

4. $\frac{d}{6} - 16 < -9$

5. $\frac{e}{-4} + 8 \leq 1$

6. $-12 \geq \frac{r}{8} - 5$

7. $\frac{5s}{6} + 7 > -3$

8. $5 \geq \frac{3x}{4} + 12$

9. $-3 - \frac{k}{5} \geq -10$

10. $15 > \frac{2m}{3} - 1$

11. $\frac{t+3}{2} < -8$

12. $\frac{3x-1}{6} < 2$

13. $4n - 6 > 6n - 20$

14. $2.4x + 13 \leq 5x$

15. $5p - 3(p - 6) \leq 0$

16. $\frac{k+10}{3} > 5$

17. $\frac{6t-4}{2} < 3$

18. $\frac{4r+3}{5} > 10$

19. $\frac{z-9}{3} > 5$

20. $\frac{4m-1}{6} < 8$

Solving Inequalities with Variables on Both Sides

1. $2z + 7 < z + 10$

2. $4(k - 1) > 4$

3. $1.5 + 2.1y < 1.1y + 4.5$

4. $h + 2(3h + 4) \geq 1$

5. $2h - 13 < -3$

6. $-4p + 28 > 8$

7. $8m - 8 \geq 12 + 4m$

8. $\frac{1}{2}t - \frac{1}{3}t > -1$

9. $2(5t - 25) + 5t < -80$

10. $\frac{2}{5}(5x - 15) \geq 4$

11. $7(2z + 3) > 35$

12. $2(3b - 2) < 4b + 8$

13. $\frac{3}{4}k < \frac{3}{4} - \frac{1}{4}k$

14. $3(4g - 6) \geq -6$

15. $4(2d + 1) > 28$

16. $9x + 2 > 20$

17. $\frac{z}{4} + 7 \geq -5$

18. $\frac{2t + 5}{3} < -9$

19. $\frac{11 - 6w}{5} > 10$

20. $6(3 - \frac{1}{3}x) < -\frac{1}{4}(8x + 1)$

Solving Compound Inequalities

1. $4m - 5 > 7$ or $4m - 5 \leq -9$

2. $x - 4 < 1$ and $x + 2 > 1$

3. $y + 6 \geq -1$ and $y - 2 < 4$

4. $10 - 2p > 12$ and $7p < 4p + 9$

5. $6 - c > c$ or $3c - 1 \leq c + 13$

6. $8 > 5 - 3z$ and $5 - 3z \geq -13$

7. $5x + 7 > 2x + 4$ or $3x + 3 \leq 24 - 4x$

8. $2 - 5(2y - 3) \geq 2$ or $3y < 2(y - 8)$

9. $5w > 4(2w - 3)$ and $5(w - 3) + 2 < 7$

10. $4t + 8 \geq t + 6$ or $7t - 14 \geq 2t - 4$

11. $3k + 1 > 10$ and $k \neq 6$

12. $5r - 2 \geq -17$ and $r \neq 3$

13. $2h + 5 \geq 2(3h + 7)$ or $3h + 5 \leq 2h + 9$

14. $3w - 1 \leq -5$ or $3 > 2w - 1$

15. $3g + 5 < -13$ or $-5g - 7 \leq 13$

17. $-2 < a + 1 < 3$

18. $-5 \leq 3d + 1 < 4$

19. $-11 < 3a + 4 \leq 7$

20. $19 - 2x \leq 12x + 5 < 3x + 41$

Solving Inequalities Involving Absolute Values

1. $|t-2|=9$
2. $|w+8|\geq 1$
3. $|2d+11|\leq 13$
4. $|4g+2|\leq 14$
5. $|2x+5|<4$
6. $|3x+4|<8$
7. $|11j+13|<-5$
8. $\left|\frac{2r+5}{-7}\right|\geq 3$
9. $\left|\frac{3j+3}{5}\right|\geq 9$
10. $|3e+5|\geq -11$
11. $|2.2f-1.1|=5.5$
12. $\left|2p-\frac{1}{3}\right|\geq 4$
13. $|3y-12|\leq 12$
14. $|2w+11|\geq 1$

Solving Word Problems Involving Inequalities

1. Mike's mean bowling score for five games is greater than 120. His scores for four games were 125, 100, 115, and 90. What is the least mike could have bowled in his fifth game?

2. The cost of a coat Ryan would like to buy is $30 more than three times the cost of a pair of pants. He plans on spending less than $150 for both items. What is the greatest amount he can spend on the pants?

3. At a certain concert, the number of seat tickets sold was 200 less than three times the number of lawn tickets sold, more than 1700 tickets were sold in all. What is the least number of lawn tickets sold?

4. The cost of a coat Emilio would like to buy is $20 more than three times the cost of a pair of pants. He plans to spend less than $105 for both items. What is the greatest amount he can spend on the pants?

5. Marla scored 58, 67, 72, and 83 on four of the five math tests. She needs at least a 72% average to be allowed to participate in volleyball. What is the least she can score on the next test?

6. Twice a number decreased by five times the sum of that number and three is at most 42. Solve this inequality, put your answer in set building notation.

7. The difference of twice a number and seven is no more than 11. Solve this inequality and put your answer in set building notation.

8. Nine times the sum of two and twice a number is at least five times the number minus three. Solve this inequality and put your answer in set building notation.

9. Philip wants to buy a shirt and a pair of shoes. The shoes cost twenty five dollars more than the cost of three shirts. He plans on spending less than $150 on one pair of shoes and one shirt. What is the most he can pay for each?