

Algebra 2 Unit 2 Review 1

HW #31: SHOW ALL WORK on a separate piece of paper

Solve each equation

1. $7m + 38 = -5m - 16$

2. $8(2n - 5) = 3(6n - 2)$

3. $\frac{3}{7}w - \frac{2}{9} = \frac{4}{9}w + \frac{1}{7}$

4. $\frac{1}{2}y + 4 = -\frac{2}{3}y + \frac{1}{2}$

5. $3(2x - 5) - x = -7(x + 3)$

6. $4\left|\frac{2}{3}z - 6\right| = 48$

7. $|8x - 1| = 6x$

8. $|9 - 2x| = 10 + 3x$

9. $|5 - q| + 10 = 17$

10. $\sqrt{-2x + 3} - 2 = 10$

11. $-4\sqrt[3]{x + 10} + 3 = 15$

12. $\sqrt[3]{x^3 + 3} + 1 = 4$

13. $\frac{1}{2}(x - 2)^{\frac{3}{4}} + 5 = 9$

14. $\sqrt[3]{4x - 9} - \sqrt[3]{2x - 4} = 0$

15. $2x^{\frac{5}{3}} - 15 = 49$

Solve each inequality and graph the solution

16. $\left|\frac{2}{5}n - 8\right| + 4 \geq 12$

17. $\frac{1}{3}|6x - 9| - 7 \geq 4$

18. $|h + 10| \leq 10$

19. $4 + \frac{3}{2}x \leq 13$

20. $2(x - 4) > 4x + 6$

21. $0 \leq \frac{3}{4}x + 3 \leq 4$

22. $-x - 4 \geq 1$ or $2 - 5x \leq -8$

23. $2\left|\frac{1}{2}x - 10\right| \leq 4$

24. $\left|\frac{1}{3}m - 15\right| + 2 < 8$

KEY:

1. $-\frac{9}{2}$

2. -17

3. -23

4. -3

5. $-\frac{1}{2}$

6. -9, 27

7. $\frac{1}{2}, \frac{1}{14}$

8. $-\frac{1}{5}$

9. -2, 12

10. $-\frac{141}{2}$

11. -37

12. $2\sqrt[3]{3}$

13. 18

14. $\frac{5}{2}$

15. 8

16. $n \leq 0$ or $n \geq 40$

17. $x \leq 4$ or $x \geq 7$

18. $-20 \leq h \leq 0$

19. $x \leq 6$

20. $x < -7$

21. $-4 \leq x \leq \frac{4}{3}$

22. $x \leq -5$ or $x \geq 2$

23. $16 \leq x \leq 24$

24. $27 < m < 63$