M/J Grade 8 Pre-Algebra 2023-2024 Final Study Guide

1. Factor into primes: 81

2. Convert to scientific notation: 1,600,000

3. Evaluate: $3.1 \times 10^3 + 4.3 \times 10^3$

4. What is 3% of 4.14×10^4?

5. Solve for b: 36b - 6 = 6(b - 3)

6. Solve for c: (c/4) + 4 < 5

7. Solve for w: $4w^3 = -32$

8. Convert into a fraction in lowest terms: 0.52

9. Evaluate: 3^2

10. Evaluate: $(1/2)^3$

11. Evaluate: $\sqrt{100}$

12. Evaluate: $\dfrac{2\sqrt{2}\sqrt{8}}{\sqrt{4}}$

13. Evaluate: $(5-3)^3 - 5^2 + 1^4$

14. Simplify: $(3x + 5) + (5x - 2)$

15. Simplify: $-2x + 11 + 6x$

16. Solve the inequality: $2x \geq 8$

17. Solve for x: $-1 = (5 + x)/6$

18. Solve for x: $4x - 9 < 21$

19. Solve for x: $x^2 = 64$

20. Find a solution to $y = 2x - 1$

21. What is the slope of $-2x + 3y = -6$?

22. Find the slope m of a line that passes through (-5, 2) and (2, 3)

23. If x = 15 and z = 19, then x + z = ?

24. If x = 15, y = 25, and z = 19, then x + y − z = ?

25. If X + 9 = 17, X= ?

26. What is 25% of 60?

27. $(x^2)^3$ = ?

28. $x^2 * x^3$ = ?

29. Simplify: $\sqrt{50}$

30. If ¾ = x/8, x=

31. Solve the system: y = 2x, x + y = 9

32. Solve for t: d = rt

33. Solve for y: 2x + y = 10

34. If x + 2 < 5, then solve for x.

35. $\sqrt{36}$ = ?

36. Simplify: $3x^2 + 2x + 5x^2 + x$ =

37. |–8| =

38. 6(2K + 3) = ?