Name _____

Date _____

Class _____

Pre-Algebra Summer Packet for incoming 8th graders

1. Find the mean, median, mode and range: {3, 5, 2, 6, 4, 4, 3, 2, 2, 3, 5, 5, 3, 2, 3, 3, 2, 5, 6}

2. Evaluate C = 2πr r = 8 π = 3.14

3. Solve for x. 7.2x = 26.48

4. 0.87 meters is how many centimeters? There are 100 cm = 1 meter

5. Simplify $(-2)^4$

6. Simplify -2^4

7. Find the prime factorization of 130

8. Find the greatest common factor of 30 and 70

9. Write in simplest form, $\frac{32ab}{4b}$

10. Order these numbers from lease to greatest. 1, 98%, $\frac{27}{12}$, 0.79

11. Evaluate when a = 3, b = 4, and c = 5 $\frac{abc}{2ab}$

12. Simplify $\frac{14xy^4}{20x^2y^3}$

13. Write in scientific notation. 8,814,000

14. Write in standard notation. 8.18×10^{-7}

15. Find the least common multiple (LCM) of $24x^2$ and $36xy^2$

16. Find the sum. $7\frac{1}{3} + 3\frac{3}{4}$

17. Find the quotient of $18\frac{3}{5} \div 6\frac{2}{5}$

18. Find the unit rate if you drive 135 miles in 3 hours

19. Solve the proportion $\frac{40}{5} = \frac{16}{x}$

20. In the words FINAL EXAM, what is the probability and odds against for picking a non-vowel?

21. A map scale is 1 in : 45 miles. What is the actual distance of the distance on the map is 3.4 inches?

22. Write 36% as a fraction and a decimal

23. Find 13% of 54

24. 20% of what number is 18

25. Find the percent of change and label it as an increase or a decrease. 298 → 412

26. Solve for x. $\frac{x}{4} - 8 = -10$

27. Solve for x. $-\frac{3}{4}(x - 8) = 2$

28. Solve for x. $-3(4 - x) + 13 = 37$

29. Solve and graph the inequality. $2x - 28 \leq 4(1 - 2x)$

30. Solve for y. $2y - 2a = 3b + 4$

31. Find the simple interest with a principal balance of $2500.00, an interest rate of 3.5% for 9 months.

32. Find the compound interest for a principal balance of $2500.00 with 4% interest rate compounded semi-annually for 6 years.

33. You have a game tonight at 5:00 pm. You want to arrive a half hour before the game starts. It will take you 1.5 hours to drive to the game and you want to stop for a 30 minute dinner. You also need to leave 15 minutes early in case of traffic. What time should you leave your house?

34. Simplify $\left(\frac{5a^4}{3b^3}\right)^2$

35. Solve for x. $-\frac{1}{4}x + 7 = 2(2x + 7)$

36. Find three consecutive integers that sum to 66

37. Find the missing sides if the figures are similar

38. A jacket is on sale for 15% off. The sale price of the jacket is $68.00. What was the original price?

39. Solve and graph the inequality. $3x - 6x + 9 < -7$

40. Solve for h. $e = \frac{h}{6} + 12$