

## Summer 2019 Math Packet for Incoming 8th graders

Name \_\_\_\_\_

Date \_\_\_\_\_

Class \_\_\_\_\_

### Pre-Algebra Summer Packet

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  $C = 2\pi r$                        $r = 8$      $\pi = 3.14$
  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 least 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.  $8.18 \times 10^{-7}$



## Summer 2019 Math Packet for Incoming 8th graders

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.  $298 \rightarrow 412$
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.  $2y - 2a = 3b + 4$



## Summer 2019 Math Packet for Incoming 8th graders

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?



## Summer 2019 Math Packet for Incoming 8th graders

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



## Summer 2019 Math Packet for Incoming 8th graders

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