POND ROAD MIDDLE SCHOOL

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KNIGHTS

"TODAY'S LEARNERS, TOMORROW'S LEADERS"

Summer 2020

Dear Parents/Guardians,

Congratulations on the completion of your child's 7th grade year! As your child prepares for the middle school experience, it is important that he/she maintains the skills necessary to be successful. The mathematics teachers have prepared a summer packet for the students to complete. This will enhance and strengthen their skills.

This packet will be checked on the first day of school and counted as a homework grade. Please complete the packet in its entirety. Please do not leave any questions blank. All work should be shown for every question.

WE STRONGLY RECOMMEND WAITING UNTIL THE LATTER PART OF THE SUMMER TO COMPLETE THIS PACKET AS THAT WILL HELP THE STUDENTS BEST REFRESH THEIR SKILLS PRIOR TO SCHOOL BEGINNING IN SEPTEMBER!!!

Please double check that you have printed out the correct summer packet that aligns with the class your child will be taking in 8th grade. This packet is for students who will be taking **Math 8** in 8th grade.

Some example problems have been provided for reinforcement as well as help in completing this summer packet. Please click on the link for additional help or you may visit the following websites.

www.aaamath.com
www.coolmath.com
www.funbrain.com
www.kidsnumbers.com
www.mathleague.com
www.khanacademy.org
www.mathplayground.com

Enjoy your summer break and we look forward to seeing you again in September!

Name: _____

Rising 8th Grade 2020 Summer Packet

For students entering Math 8

PLEASE WRITE ALL ANSWERS ON THE LINES AT THE RIGHT.

SHOW ALL WORK FOR EVERY PROBLEM.

USAGE OF A CALCULATOR IS NOT ALLOWED UNTIL PART 5.

PART 1 – ORDER OF OPERATIONS

Simplify. WATCH YOUR SIGNS!!!   (Example: https://goo.gl/qO2VUK)

1) $8 - 3 + 9 - 2$

2) $(-9)(-2)(3)$

1. _____

2. _____

3) $-30 \div -5$

4) $|4 - 13|$

3. _____

4. _____

5) $(-5)^2$

6) -3^2

5. _____

6. _____

7) -2^5

8) $(-7)^3$

7. _____

8. _____

9) $12 - 6 \div 2 \cdot 3$

10) $9 - (6 + 4^2)$

9. _____

10. _____

11) $14 + |-2|$

12) $15 + 2 - |-7|$

11. _____

12. _____

13) $20 - \sqrt{100} + 2(5 - 12)$

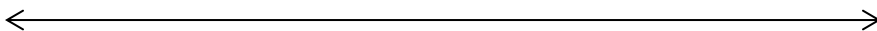14) $\dfrac{5 - (2 - 5)^2}{4 + 24 \div 6(3)}$

13. _____

14. _____

PART 2 – RATIONAL NUMBERS

15) Plot the following data set on the given number line. Make sure you label your points.

$$\{-2.3, \ 4\tfrac{1}{3}, \ 0.75, \ 4.5, \ \tfrac{30}{6}, \ \left|-\tfrac{29}{4}\right|, \ \sqrt{81}\}$$

$\longleftarrow \hspace{6cm} \longrightarrow$

16) Write the numbers in order from least to greatest.

$$\{9.089, \ 9.8, \ 9.0, \ 9.08, \ 9.088, \ 9.009\}$$

Compare using $<, >$, or $=$.   Show work to justify your answer.

17) $\dfrac{3}{7}$ _____ 0.43

18)   3.54 _____ $3\dfrac{5}{9}$

Simplify. WATCH YOUR SIGNS!!!

19) $3.87 + 1.2 + 9.05$

20) $23.34 - 8.95$

19. _____

20. _____

21) $18.12 - (-5.79)$

22) $-14.6 + 23.4 + (-3.6)$

21. _____

22. _____

23) $(1.42)(-7.2)$

24) $2814 \div 0.14$

23. _____

24. _____

Simplify. Write your answers as proper or improper fractions or mixed numbers.

(Example: http://www.showme.com/sh/?h=NCF0t3w**)**

25) $-2\frac{2}{5} - 3\frac{4}{9}$

26) $27\frac{3}{4} + 11\frac{3}{7}$

25. _____

26. _____

27) $14\frac{8}{9} - 5\frac{1}{2}$

28) $23\frac{1}{4} - 7\frac{4}{5}$

27. _____

28. _____

29) $18 - 6\frac{4}{11}$

30) $-5 \cdot 1\frac{1}{7}$

29. _____

30. _____

31) $\frac{32}{48} \cdot \frac{60}{64}$

32) $5\frac{3}{5} \cdot -3\frac{4}{7}$

31. _____

32. _____

33) $5\frac{5}{8} \div 5$

34) $-8\frac{1}{3} \div -4\frac{4}{5}$

33. _____

34. _____

PART 3 – EXPRESSIONS

Translate the following expressions and equations.

35) Eight more than triple a number   35. _____

36) The quotient of twelve and a number is five.   36. _____

37) Seven times the sum of a number and two   37. _____

38) Forty is the product of a number and nine.   38. _____

Evaluate the following if: $w = 3$, $x = -5$, $y = -2$, $m = 2.4$, $n = 7$, and $p = \dfrac{3}{4}$

(Example: http://www.showme.com/sh/?h=w3kFme8**)**

39) $wx - yn$ 40) $9w - x$ 39. _____

                                                          40. _____

41) $x^2 - 4y$ 42) $\dfrac{wxy + ny}{-2xy}$ 41. _____

                                                          42. _____

43) $yp - m$ 44) $\dfrac{mx}{w} + y - 3y^2$ 43. _____

                                                          44. _____

Simplify the following expressions

45) $8x - 9 + 2x + 3 - 14x$ 46) $10 - 8m - 4 + m - 9$ 45. _____

46. _____

47) $5(2x - 3) + 6$ 48) $5 - 4(3x + 1) + 11x$ 47. _____

48. _____

PART 4– EQUATIONS

49) State how you would check to see if **7** is a solution to the given equation.
DO NOT SOLVE THE EQUATION!!!

$3x - 5 = 12$

Solve the following equations. Show all work.

(Example: http://www.showme.com/sh/?h=ujv9Ck4**)**

50) $x + 6 = -9$ 51) $\frac{x}{8} = -5$ 50. _____

51. _____

52) $12 = -2n$ 53) $14 + y = -11$ 52. _____

53. _____

PART 5 – RATES/RATIOS/PROPORTIONS

Find the unit rate

54) work for 12 hours and earn $140   54. _____

55) travel 900 miles in 15 hours   55. _____

Solve the following proportions. Round answer to the nearest tenth.

56) $\dfrac{3}{7} = \dfrac{11}{x}$ 57) $\dfrac{y}{3} = \dfrac{191}{20}$ 56. _____

57. _____

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58) If Susan can read 40 pages in 12 minutes, how many pages
    can she read in 50 minutes?

58. _____

59) The key on a map says 2 inches equals 7 miles. If two cities are
    9 inches apart on the map, how far apart are they in real life?

59. _____

PART 6 – PERCENTS

Convert to a decimal.

60) $\dfrac{7}{20}$ 61) 31%   62) $\dfrac{4}{9}$

60. _____

61. _____

62. _____

Convert to a fraction.

63) 3.25   64) 8%   65) 0.125

63. _____

64. _____

65. _____

Convert to a percent.

66) 0.84   67) $\dfrac{2}{3}$ 68) 6.12

66. _____

67. _____

68. _____

Estimate using fractions (not proportions)

69)   34% of 15   70)   74% of 81

69. _____

70. _____

Solve. Show work.

71) 56 is what percent of 80?   72) 19 is 20% of what number

71. _____

72. _____

Solve the following problems using any method.

73) 30 students in grade 8 finished their summer packet before August 15.
     This was 12% of all the students. How many students are in grade 8?

73. _____

74) There are 1,200 people at the beach.   If 88% of them went in the water,
     how many people **DID NOT** go in the water?

74. _____

75) A $800 T.V. is on sale for 15% off. What is the cost of the T.V.?

75. _____

76) You go out to dinner and the bill is $45.12.   You want to leave
     an 18% tip. In total, how much money should you leave?

76. _____

77)   A car dealership buys a car for $20,500 and marks up the price
      by 12%.   How much does the dealership sell the car for?

77. _____

78) The cost of a calculator is $31. If the tax rate is 7%, what
     is the final cost of the calculator?

78. _____