



2019 – 2020

Bishop Kelley High School

Course: Algebra I Part I

NAME: _____

DIRECTIONS:

- **Show all work** in the packet or on loose-leaf paper, which you will turn in with the packet.
- Calculators are not permitted for this packet.
- This packet is due on the first day of your math class.
- This material will be graded, and points awarded at the discretion of each teacher
- A test on this material will be administered during the first week of the class.
- An additional resource for help with this packet is <http://www.khanacademy.org>. It provides videos of about 10 minutes in length on hundreds of different math topics.

Math Teachers will be available in C-1 the following dates/times if you need help.

Date	Time
<i>Wednesday, July 24th</i>	<i>8-9:30am</i>
<i>Monday, July 29th</i>	<i>8-9:30am</i>
<i>Tuesday, July 30th</i>	<i>8-9:30am</i>

Name _____

SUMMER MATH PACKET

Students entering Algebra I Part 1 during August 2019

Directions: Use a pencil and **SHOW ALL** work!! **Calculators are not permitted.** This will be turned in on the first day of your math class.

ORDER OF OPERATIONS:

1. Do operations that occur within grouping symbols (parentheses, brackets, absolute value bars, radicals).
2. Evaluate powers if there are any.
3. Then do multiplications and divisions **as you see them, in order, from left to right.**
4. Finally, do additions and subtractions **as you see them, in order, from left to right.**

EXAMPLES:

$16 + 4 \div 2 - 3$ Since there are no grouping symbols or exponents, do the division first

$16 + 2 - 3$ From left to right, do the addition next

$18 - 3$

15

$10 - 6[(7 - 4)^2 + 3] + 2(-1)^2$ Since there are grouping symbols, do inside them first.

$10 - 6[3^2 + 3] + 2(-1)^2$ Next do the powers

$10 - 6[9 + 3] + 2(1)$ Now do inside the brackets

$10 - 6(12) + 2(1)$ Time to multiply

$10 - 72 + 2$ From left to right, do the subtraction

$-62 + 2$

-60

Simplify each expression. (This will require order of operations)

1. $2 + 3 \times 8 \div 6$

2. $32 \div 2 \times 8 + 6$

3. $5 + (12 \times 3)$

4. $30 - 4^2 + (3 + 2)$

5. $(12 - 7)^2 \times 3 - 6$

6. $8^2 \div 8 + 6 \times 3$

Evaluate when $x=3$, $y=1$, and $z=2$

7. $12 - (z - y)^2$

8. $3 + [(13 - x) \times 18]$

9. $\frac{y}{z + 3y}$

Write the mixed number as an improper fraction.

10. $7\frac{2}{9}$

Write each fraction as a mixed number.

11. $\frac{43}{9}$

Evaluate. Express answer in simplest form.

12. $\frac{2}{9} + \frac{4}{9}$

13. $\frac{2}{3} + \frac{3}{5}$

14. $\frac{3}{4} + \frac{1}{3} + \frac{5}{6}$

15. $3\frac{3}{10} + 8\frac{1}{5}$

16. $1\frac{1}{9} - \frac{1}{3}$

17. $\frac{5}{9} - \frac{1}{4}$

18. $-\frac{4}{5} \cdot 20$

19. $-\frac{2}{9} \cdot \frac{3}{8}$

20. $3\frac{1}{2} \cdot 1\frac{6}{7}$

21. $\frac{8}{9} \div \frac{6}{36}$

22. $1\frac{2}{5} \div 2\frac{5}{7}$

23. $10 \div 3\frac{1}{3}$

24. $9.18 + 6.45$

25. $0.9 + 15.67$

26. $3.8 + 12.45 + 37.08$

27. $8.3 - 3.58$

Evaluate. Express fractional answers in simplest form.

28. 3.2×7.4

29. $(-3.2)(-7.16)$

30. $3.2 \div 8$

31. $480 \div .006$

32. $\frac{-48}{12}$

33. $\frac{-3\frac{1}{2}}{-4}$

Evaluate.

34. $12 - 18$

35. $(-17) - 12$

36. $(-8) - (-6)$

37. $(-14) + (-3)$

38. $(-7) + 11$

39. $9 + (-5)$

Write each decimal as a percent.

40. 54%

41. 3%

42. 250%

Write each percent as fraction in simplest form.

43. 64%

44. 20%

Write each fraction as a percent.

45. $\frac{3}{10}$

46. $\frac{17}{25}$

Solve. You may use a calculator for these 4 problems but you must write an equation. (Do NOT just put an answer)

47. What number is 5% of 186?

48. What number is 75% of 192?

49. What percent of 25 is 20?

50. 25% of what number is 6?

Solve. (Make sure you show work and not just an answer)

51. $x - 6 = 13$

52. $a + 8 = 20$

53. $c - 2 = -32$

54. $7n = 56$

55. $\frac{n}{5} = 20$

54. $4x = 18$

Read the following problems carefully then solve the arithmetic problems in the space provided. Do NOT use a calculator. Any answers that are not supported by work will receive "zero" credit.

55. At one table in the cafeteria, several students shared 3 pizzas. Each pizza was cut into 8 slices. After the students shared the pizza equally, there were 3 slices left over. How many students shared the pizza? How many slices of pizza did each student eat?

56. Melanie's family took a trip. The first day they drove 140 miles. The second day they drove 210 miles. The third day they drove 120 miles. How many miles did they drive altogether? What was their average mileage per day?

57. Melanie's mother bought 30 gallons of gas during their trip. If they drove a total of 660 miles, how many miles did they drive per gallon of gas? If gas costs \$3.59 per gallon, how much did she spend on gas for the trip?

58. Mary practices the violin for 45 minutes each day. How many minutes does she practice in one week? How many hours?

59. The 158 students from Loyola Middle School are going on a picnic. If there are 8 hot dogs in a package, how many packages are needed for each student to have 2 hot dogs?

60. Mrs. Jackson bought 7 dozen eggs for an egg-tossing contest. If each of the 26 teams is given the same number of eggs, how many eggs does each team get?

61. A 7-pack of granola bars costs \$6.93. What is the unit price? (Unit price is what you would pay for 1 of the items.)

62. The Shaw family drove from Boston to Houston in 6 days. If they drove the same distance each day, about how many miles did they drive each day?
Use the information from the chart at the right.

Road Mileage from Boston, MA	
City	Number of miles
Kansas City, MO	1391
Philadelphia, PA	296
Houston, TX	1804

63. Tom and his family leave Boston on Monday morning to drive to Kansas City. If they drive about 150 miles each day, what day should they arrive in Kansas City?

64. Connor must be at school by 8:00 am. It takes him 1 hour to get ready in the morning and 35 minutes to drive to school. What is the latest time Connor can get up in the morning without being tardy to school?