Bridgeport Public Schools
Mathematics Department

SUMMER MATH PACKET

FOR THOSE STUDENTS ENTERING EIGHTH GRADE
2018

Name _____
School _____
Parent's Signature _____

Parents,

This 'Summer Math Packet' was prepared to enhance your child's mathematics skills over the summer months and to ensure his/her success in the upcoming school year. The open-ended activities involve both skill development and problem solving. While most students should be able to complete the problems independently, some students may need your help in developing a work plan and in managing their time. Students are expected to complete the entire packet and return it to their school on the third day of school, September 4, 2018.

Students,

The purpose of this 'Summer Math Packet' is to give you a chance to practice some of the concepts you learned this past year in preparation for the upcoming school year. You must complete this packet to the best of your ability. This packet will be collected by your teacher on the third day of school.

Here are some helpful hints that will help you complete this packet:

- Show all work on each problem. When problems ask you to explain, be sure to write your answer using complete sentences, not just a few words.
- Do a little of your 'Summer Math Packet' each day. You are not expected to do it all on the first day.
- Try your best to solve every problem. If you need help, ask an adult or a friend, or visit some of the websites listed at the end of this packet.

Thank you and enjoy your summer.

Herminio Planas
Director of Mathematics
Bridgeport Public Schools

Entering Grade 8 - Part I - Multiple Choice

Circle the correct answers. Make sure that you show all necessary work to receive credit.

1. Which means the same as 5 + 0.4 + 0.09?

a. 540.9
b. 54.09
c. 5.49
d. 5.049

2. Jeffrey needs to multiply 689 by 39, 899. Which of the following would be BEST for Jeffrey to use to ESTIMATE the difference?

a. 600 x 30,000
b. 600 x 40,000
c. 700 x 30,000
d. 700 x 40,000

3. Which means the same as 5.94 x 10 3 ?

a. 594.00
b. 5.940
c. 59.40
d. 5,940

4. Danny's restaurant served 142,704 customers last year. This number ROUNDED to the NEAREST thousand is

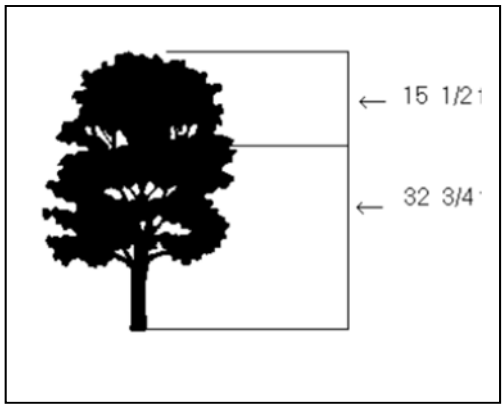
a. 140,000
b. 142,000
c. 143,000
d. 142,700

5. Samantha scored between 9.2 and 9.4 points. Which could be the number of points she scored?

a. 9.03
b. 9.41
c. 9.19
d. 9.23

6. What is the total height of the tree?

a. 48 ¼ ft.
b. 47 4/6 ft.
c. 46 ¼ ft.
d. 47 ¼ ft.



7. Sean just bought *M* baseball trading cards. He sold 4 to his friend. Which expression represents how many new baseball cards he has left?

a. $4 - B$
b. $B - 4$
c. $B + 4$
d. $4B$

8. Joseph used his computer 6 ¼ hours on Monday, 6 ½ hours on Wednesday and $7\frac{7}{8}$ hours on Friday. Which list shows these days in order from the GREATEST to LEAST amount of computer time?

a. Monday, Wednesday, Friday
b. Wednesday, Monday, Friday
c. Friday, Wednesday, Monday
d. Friday, Monday, Wednesday

9. 30 percent of Sarah's family likes Rocky Road Ice Cream. What decimal names the same amount?

a. 0.3
b. 0.33
c. 0.03
d. 3.0

10. If the ratio of milk to water in a recipe is 1 to 3, which of these should NOT be used in the recipe

a. 4 parts milk, 12 parts water
b. 3 parts milk, 9 parts water
c. 12 parts milk, 4 parts water
d. 2 parts milk, 6 parts water

11. Which percent names the amount of the grid that is not shaded?

a. 73 percent
b. 7.3 percent
c. 27 percent
d. 2.7 percent

12. $3/4 + 1/8 =$

a. $\frac{4}{12}$ b. $\frac{7}{8}$ c. $\frac{4}{8}$ d. $\frac{3}{32}$

13. $\frac{3}{5}$ of Chip's family like buttered popcorn. Which decimal number names the same amount?

a. 3.5
b. 0.35
c. 0.40
d. 0.60

14. The sun is approximately 93,000,000 miles away from Earth. What is this distance in scientific notation?

a. 93 x 10 7
b. 930 x 10 7
c. 9.3 x 10 7
d. .93 x 10 7

15. The table shows the results of a probability experiment involving picking colored cubes out of a box. Color Number of Times Picked Orange 5 White 7 Yellow 4 Green 2 Blue 6 Pink 5

Which would be a REASONABLE statement about all the cubes in the box?

a. There is a greater chance of picking a blue cube than a pink cube.
b. There are more orange cubes than any other cubes
c. There are no white cubes
d. There are the same number of yellow cubes and green cubes

16. Michael rode on the train 168.45 miles the first week of work and 149.85 miles the second week. ABOUT how many miles did he ride on the train during the two weeks?

a. A little less than 320
b. A little more than 320
c. A little less than 330
d. A little more than 330

17. To ESTIMATE the product of 8260 and 6094, Kaitlin multiplied 8000 x 6000. Would Kaitlin's estimate be MORE or LESS than the actual product?

a. More, because she rounded both numbers up.
b. More, because she rounded both numbers down.
c. Less, because she rounded both numbers up.
d. Less, because she rounded both numbers down.

18. Vinny worked 8 hours and was paid a total of $66. At this rate, how long would it take Vinny to earn $165?

a. 40.5 hours
b. 20 hours
c. 15 hours
d. 2 ½ hours

19. Based on the data in the stem and leaf plot, how many students were 5 feet tall or under?

Height in Inches

5	8
5	9
6	000
6	11
6	2222
6	333
6	4
6	5
6	6

a. 2
b. 3
c. 5
d. 12

20. Yolanda is 180 centimeters tall. How many meters tall is that?

a. 0.800
b. 1.8
c. 18
d. 15,000

21. 15 x $\frac{2}{3}$ =

a. 10
b. 22 ½
c. 15 $\frac{2}{3}$
d. 22 $\frac{1}{3}$

22. Jeremy rode his bike between 1 ½ and 1 ¾ hours. Which could be the number of hours he rode?

a. 1 $\frac{3}{8}$ b. 1 $\frac{5}{8}$ c. 1 $\frac{7}{8}$ d. 1 $\frac{13}{16}$

23. This table shows the AVERAGE number of people that stop at Carla's store for each day.

Day	Average Number of People
Monday	202
Tuesday	190
Wednesday	185
Thursday	212
Friday	287

Carla needs to close early one day next week. Based on this data, which day would be BEST for Carla to close early?

a. Monday
b. Tuesday
c. Wednesday
d. Thursday

24. In what quadrant would the following point be located?

(4, - 9)

a. Quadrant I
b. Quadrant II
c. Quadrant III
d. Quadrant IV

25. Which of the following measurements would be MOST likely to have a negative exponent in scientific notation?

a. The distance the Earth is from the sun in meters.
b. The length of a needle in millimeters
c. The length of a football field in inches.
d. The length of an amoeba in meters.

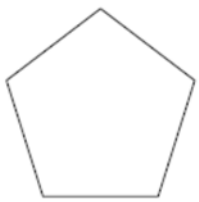
26. An angle measuring 75° is called:

a. an obtuse angle
b. a straight angle
c. an acute angle
d. right angle

27. An angle measuring 143° is called:

a. an obtuse angle
b. a straight angle
c. an acute angle
d. right angle

28. What is the name of this shape?



a. decagon
b. pentagon
c. octagon
d. quadrilateral

29. Emily can read 30 pages in 45 minutes. At this rate, how many pages will she read in 3 hours?

a. 60 pages
b. 90 pages
c. 120 pages
d. 150 pages

30. The population of Ohio's three largest cities are: Cleveland, 479,459; Columbus, 715,230; and Cincinnati, 367,000. The average population of Ohio's three largest cities is:

a. 520,563
b. 620,563
c. 502,563
d. 602,563

31. Mr. Gorski bases each student's grade on 4 tests. On the first 3 tests, Horace scored 84, 93, and 88. What must he score on the final test to make his average 90?

a. 85
b. 88
c. 92
d. 95

32. Margaret baked 100 brownies. She decided to decorate them by putting:

- Nuts on every fourth brownie, starting with the fourth brownie.
- Coconut on every fifth brownie, starting with the fifth brownie.
- Chocolate Chips on every eighth brownie, starting with the eighth brownie.

How many brownies got all three decorations?

a. none
b. 2
c. 4
d. 6

33. Power Video rents only horror and science fiction videos. In one week, they rent 5 horror videos for every 9 science fiction videos. If they rented 99 science fiction videos in that week, what was the number of horror videos rented?

a. 11
b. 45
c. 22
d. 55

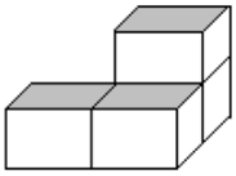
34. What is the length of one side of a square that has an area of 289 in^2 ?

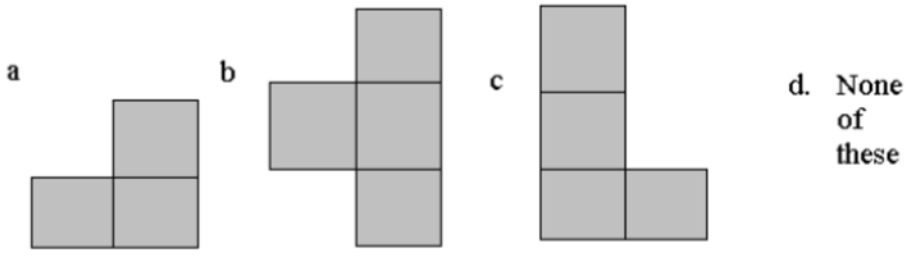
a. 7
b. 14
c. 17
d. 27

35. If $2m + 5 > 19$, then which of the following is true ?

a. $m = 7$
b. $m > 7$
c. $m < 7$
d. $m > 7$

36. When you look straight down at the top this stack of four blocks, what shape you would see?





37. The length of the classroom wall is BEST measured in

a. millimeters
b. centimeters
c. meters
d. kilometers

Part II Short Answer Questions
DIRECTIONS: For Questions 38 to 49 write your answers in the space provided but do not forget to show your work.

38. Kelly saved 25 percent of her $120 paycheck. How much money did she save?

_____

39. 5 is what percent of 25

_____

40. The employees of the local insurance company raised $890.63 for Relay For Life. The employees of a local car dealership raised $980.56. How much money did they raise together?

_____

41. Solve this problem.
1,243 + 847 =

_____

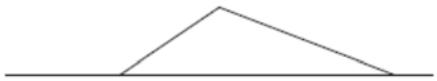
42. Solve this problem.
38.50 x 1000 =

_____

43. Draw a hexagon, then describe what a hexagon is.

_____

44. Draw a reflection of the figure across the line *h.*



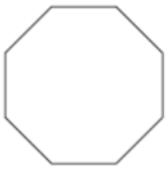
45. Shade 1/4 of the shape.

46. What is the value of X in this equation?

X – 87.4 = 57.52

_____

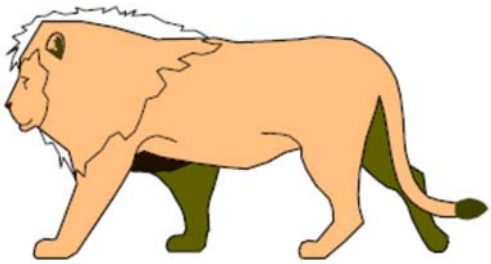
47. Draw a figure congruent to the one below.



Explain why the figure you drew is congruent.

_____
_____

48. If length of the toy turtle is 30 centimeters then the length of the toy lion from the tip of his nose to the tip of his tail is ABOUT …



_____
_____
_____
_____

49. What is the value of X in this equation?

X + 4.9 = 45.3

_____

Part III

Open –Ended Questions and Extended Questions

50. Write a story problem that can be solved using the equation:

18.50 ÷ 0.5 = x

_____
_____
_____
_____

51. Jocelyn wants to ESTIMATE the cost per ounce of a 9.8-ounce jar of gravy that costs $2.75. What would be a GOOD ESTIMATE?

Explain how you made your estimate,

_____
_____
_____

52. Complete the table of values below for the equation y = 3x –2

X	Y
–1	
0	
1	
2	

53. Jessica's dog weighed 91.5 pounds at the beginning of summer but lost 5.2 pounds by the end of summer. Which number sentence could be used to determine the dog's weight at the end of the summer?

_____

54. Martin wanted to earn enough money to buy a new stereo. He created the following table to show the hours he was available to work each day.

Day	Hours Available to Work
Saturday	4 hours
Sunday	3 ½ hours
Monday	1 ½ hours
Tuesday	3 hour
Wednesday	1 ½ hours
Thursday	2 ½ hours
Friday	1 ½ hours

Martin earns $7.75 per hour and can only work 12 hours each week.

In the space below, create a schedule that shows the 12 hours Martin could work each week,

Then determine how many weeks Martin needs to work in order to make $450. Show your work.

_____
_____
_____
_____
_____
_____
_____

55. Leslie bought 4 notebooks that each cost $2.99 and 5 pens that each cost $.99. She handed the clerk $20. If there is no tax, how much change should Leslie receive? Show or explain how you got your answer.

_____
_____
_____
_____

56. Rose and her three friends had $80 to spend at a restaurant. The members of the group are Rose, Betty, Melanie and Tyrone. The menu at the restaurant is as follows:

Entrees	
Chicken dinner	8.95
Hamburger	6.95
Club Sandwich	7.95
Shrimp Dinner	9.95
Drinks	
Large Soda	2.50
Milkshake	3.50
Coffee	1.25
Milk	1.50
Desserts	
Cheesecake	5.50
Mud Pie	4.95
Ice Cream Sundae	3.75

Each member of the group ordered a least one entrée, at least one drink, and only one dessert. Show what each member could have ordered and how much each spent if the group spent between $70 and $80 in all.

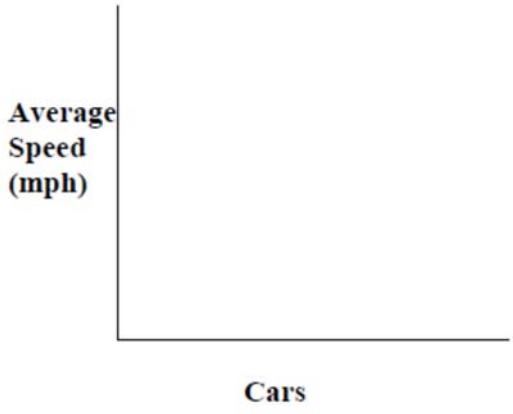
_____
_____
_____
_____
_____

57. The table shows the number of gallons of paint sold at a paint store each week in one month. What was the AVERAGE number of gallons of paint sold each week this store?

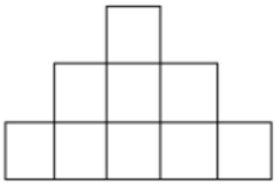
Week	Average Number of Gallons Sold
1	395
2	452
3	417
4	286

58. The table shows the AVERAGE speeds for the FIRST 4 finishers in a car race. Create a BAR GRAPH to show the same information. Use the graph below or attach another piece of paper if you would like to draw a larger graph.

Car	**Average Speed (mph)**
1	114
2	106
3	122
4	132



59. Jameson is stacking cubes. How many total cubes will he use to complete the pattern shown below if he makes a total of 10 rows?



60. In this formula, C represents the total charge in dollars for babysitting, and H represents the number of hours the child is watched. How much should Jonathan pay if his child is at the babysitting service for 3 hours? Be sure to show your work.

C = 5.25 + 4.25 H

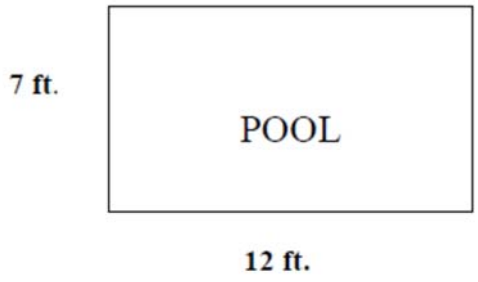
_____
_____
_____

61. Rachel, Meghan, and Tiffany are going to see a movie. Suppose the girls randomly sit in 3 seats next to each other.

- List all the seating arrangements that are possible below.

- What is the probability that Rachel will sit next to Tiffany?

62. What is the AREA of the Pool? _____



Using the dimensions above, how much water would fill the pool if the depth of the pool is 3 feet? _____

To enclose the pool with a fence, how much material is needed if the fence is 6 feet away, on all sides, from the pool? _____

Be sure to show all work for your solutions.

63. Suppose you toss 3 quarters into the air and they land on the floor. Complete the table to show all the possible outcomes.

Quarter 1	Quarter 2	Quarter 3

What is the probability that all 3 quarters will land tails up?
Write your answer as a fraction.

What is the probability that 2 quarters will land heads up and 1 quarter will land tails up? Write your answer as a fraction.

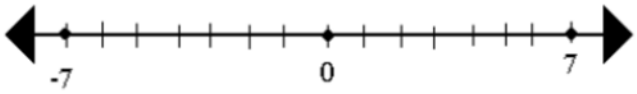
64. What is 0.1 less than 4.93 ? Show your work.

65. Put the following integers in order from greatest to least.

$$-6,\ 9,\ -1,\ 0,\ 3,\ -2$$

66. Label the numbers on the number line below.

$$-6,\ 1\tfrac{1}{2},\ -1,\ 0,\ 3\tfrac{1}{2},\ -2$$



67. Draw exactly 1 line of symmetry on the figure. Then write a sentence or two to tell why the line you drew is a line of symmetry.

_____

_____

_____

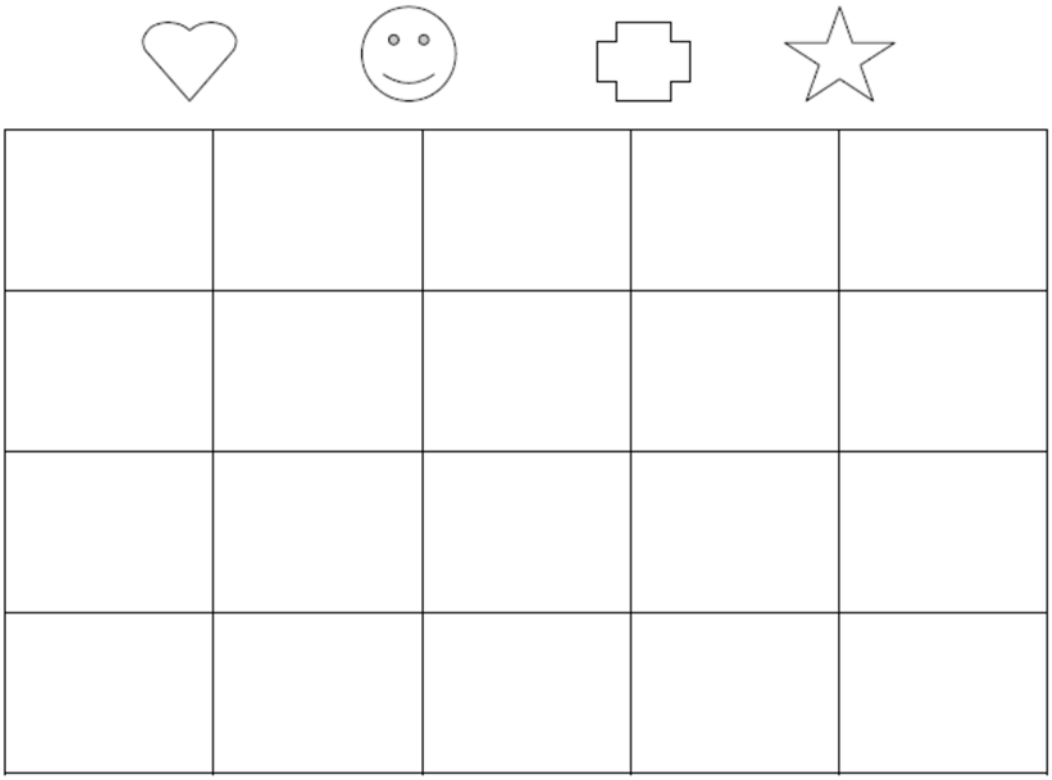
68. Solve

$$\begin{array}{r} 794 \\ \times\ 0.23 \\ \hline \end{array}$$

69. Solve

$$\mathbf{24 \div (5 + 3) =}$$

70. You are to design a linoleum stamp for art class. You need to use the following shapes to fill in each square below. The teacher wants the design to have only one line of symmetry. You must use all the shapes at least once. Draw in the line of symmetry.



71. Nate has $200.00 to buy CDs. A store sells them for $17.99
What is a GOOD ESTIMATE of the number of CDs he could buy?
Explain how you made your estimate.

72. Jorge was having a party on Saturday. He needed to buy decorations. He bought streamers for $5.79, a piñata for $15.98, a dozen balloons for $10.99 and a birthday banner for $6.49. He had only 2 twenty-dollar bills in his wallet. Did he have enough for the decorations?

Websites

www.funbrain.com – Practice in all areas of computation at different levels. Also contains some more challenging games.

www.aaamath.com – Choose practice area by topic or grade level.

WWW.aplusmath.com – Bingo, Concentration, printable flash cards, and both online and printable worksheets.

http://www.superkids.com/aweb/tools/math - Printable math worksheets and logic games.

www.teachingtables.co.uk/ - Variety of multiplication games.

www.multiplication.com – Multiplication practice.

http://www.internet4classrooms.com/grade_level_help.htm - Practice in all areas. Easy to use – activities are grouped by skill type. Click on "Skill Builders" the grade level.