Wilbraham Middle School
Summer Math
for Students Entering Grade 7

Name _____

This packet will help you review some basic skills that will be necessary for you to be successful in your math class in 7th grade at Wilbraham Middle School.

Follow the directions, read through the information in the boxes, and complete every question. It will be graded!

Pace yourself and do a few problems every day or once a week. Don't save it all for the day before school starts!

Directions:

★ Show **all** your work neatly in the packet. (You may attach additional lined paper if necessary.)

★ Do **NOT** use a calculator.

★ If you need it, use the 6th Grade Math Reference Sheet that is attached (last page of packet).

★ Try **every** problem and do your best!

★ The second to last page is a reflection sheet...please answer the questions honestly.

Due Date: _____

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

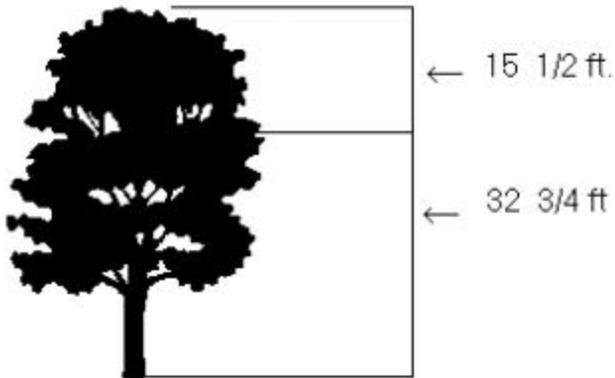3. Which means the same as 5.94×10^3?
a. 594.00
b. 5.940
c. 59.40
d. 5,940

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?

← 15 1/2 ft.

← 32 3/4 ft

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

7. Sean just bought M Pokemon trading cards. He sold 4 to his friend. Which expression represents how many new Pokemon cards he has left?
a. 4 – M
b. M – 4
c. M + 4
d. 4M

8. Joseph used his computer 6 1⁄4 hours on Monday, 6 1⁄2 hours on Wednesday and 7 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?
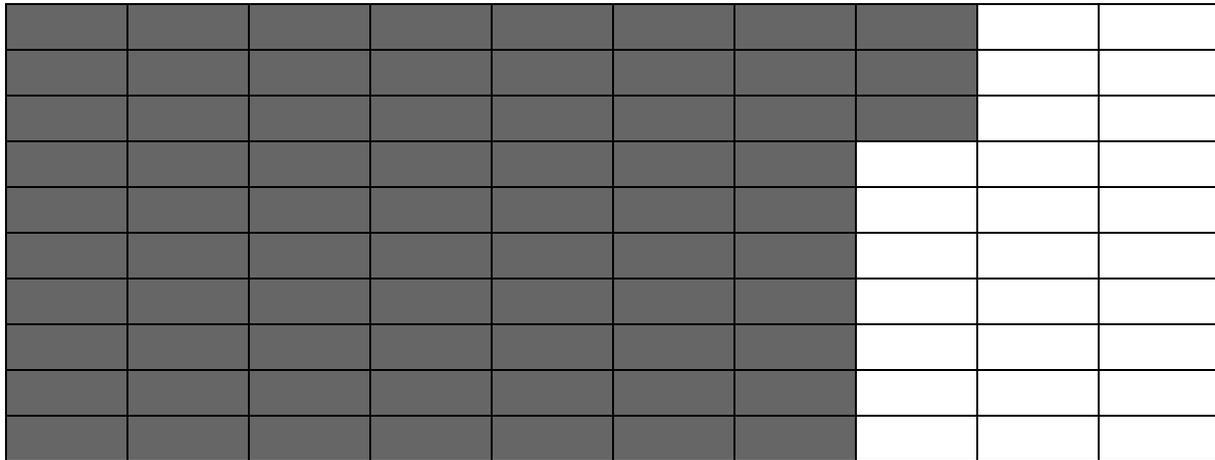
a. 73 percent
b. 7.3 percent
c. 27 percent
d. 2.7 percent

12. 3/4 + 1/8 =
a. 4/12
b. 7/8
c. 4/8
d. 3/32

13. 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 expression is equivalent?
a. 93×10^7
b. 930×10^7
c. 9.3×10^7
d. $.93 \times 10^7$

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. 2.5 hours

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

Height in Inches

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5 | 8
5 | 9
6 | 000
6 | 11
6 | 2222
6 | 333
6 | 4
6 | 5
6 | 6
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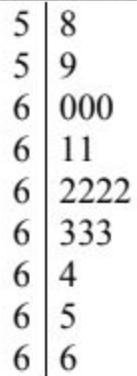
a. 2
b. 3
c. 5
d. 12

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 2/3 =
a. 10
b. 22 1/2
c. 15 2/3
d. 22 1/3

22. Jeremy rode his bike between 1 1/2 and 1 3/4 hours. Which could be the number of hours he rode?
a. 1 3/8
b. 1 5/8
c. 1 7/8
d. 1 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 equations with exponential expressions are true? Select the three correct equations.
    a. 2^3 = 2 • 2 • 2
    b. 3^2 = 2 • 2
    c. 4^5 = 4 • 4 • 4 • 4 • 4
    d. 5 • 5 = 2^5
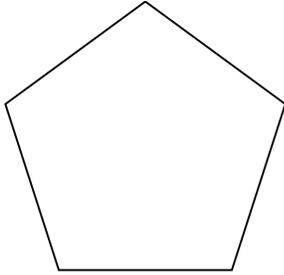   e. 6 • 6 • 6 = 6^3
    f. 7 • 7 • 7 • 7 • 7 • 7 • 7 = 7^1

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

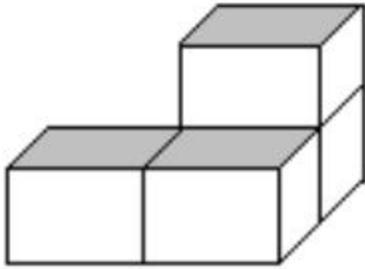35. If 2m + 5 > 19, then which of the following is true ?

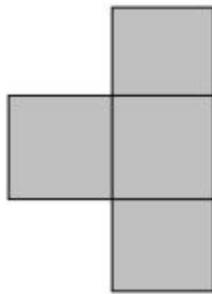a. m = 7

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?

a

b

c
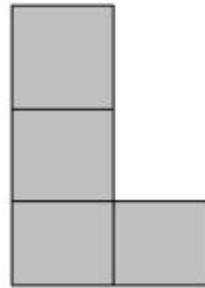
d. None of these

37. The length of the classroom wall is BEST measured in
a. millimeters
b. centimeters
c. meters
d. kilometers

Part II Short Answer and Open-Ended Questions

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 =

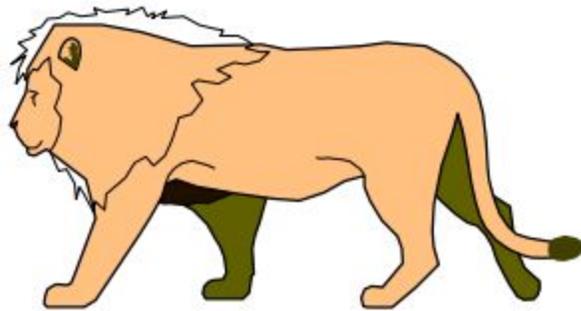43. What is the value of x in this equation?
x – 87.4 = 57.52

44. 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 ...

45. What is the value of x in this equation?
x + 4.9 = 45.3

46. Write a story problem that can be solved using the equation:
18.50 ÷ 0.5 = x

47. 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.

48. Jessica's dog weighed 91.5 pounds at the beginning of summer but lost 5.2 pounds by the end of summer. Write a number sentence that could be used to determine the dog's weight at the end of the summer.

49. 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 hours
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.

50. 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.

51. 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.

52. 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

53. 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?
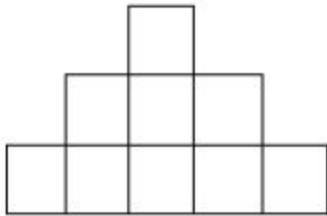
54. In this formula, C represents the total charge in dollars for babysitting, and H represents the number of hours the child is watched. How much should Jonathan pay if his child is at the babysitting service for 3 hours? Be sure to show your work.
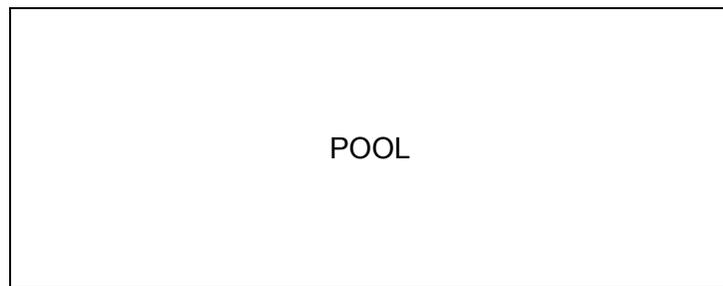**C = 5.25 + 4.25 H**

55. 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?

56. What is the AREA of the Pool? _____

7 ft.

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┌─────────────────────────────────────────────┐
│                                             │
│                                             │
│                                             │
│                    POOL                     │
│                                             │
│                                             │
│                                             │
└─────────────────────────────────────────────┘
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12 ft.

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? _____
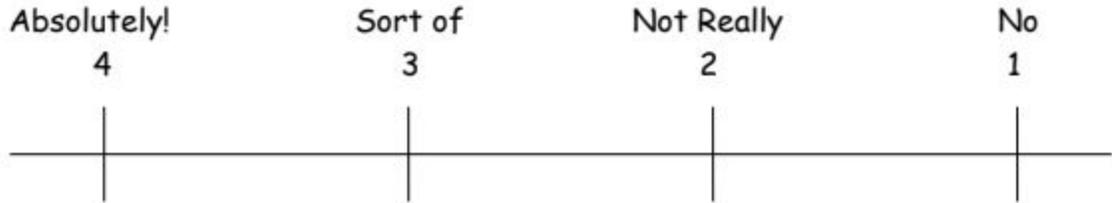
57. What is 0.1 less than 4.93 ?

58. Put the following integers in order from greatest to least.
–6, 9, –1, 0, 3, –2

59. Solve 794 x 0.23=

60. 24 ÷ (5 + 3) =

Summer Packet Reflection:

Rate yourself on the scale from one to four for each of the following statements:

Absolutely!	Sort of	Not Really	No
4	3	2	1

_____   1. I followed the directions on the front of the packet.

_____   2. I gave my best effort in completing the problems.

_____   3. If I didn't understand a problem, I have a question ready to ask in class.

_____   4. I was able to complete the packet independently.

_____   5. I paced myself in completing the packet instead of cramming it all over Labor Day weekend.

_____   6. I think this packet helped me remember some of the things I've learned in math.

7. List two skills from the packet that you feel you have completely mastered.

1.   _____

2.   _____

8. List two skills in which you would like more practice.

1.   _____

2.   _____

CONVERSIONS

1 cup = 8 fluid ounces

1 pint = 2 cups

1 quart = 2 pints

1 gallon = 4 quarts

1 gallon ≈ 3.785 liters

1 liter ≈ 0.264 gallon

1 liter = 1000 cubic centimeters

1 inch = 2.54 centimeters

1 meter ≈ 39.37 inches

1 mile = 5280 feet

1 mile = 1760 yards

1 mile ≈ 1.609 kilometers

1 kilometer ≈ 0.62 mile

1 pound = 16 ounces

1 pound ≈ 0.454 kilogram

1 kilogram ≈ 2.2 pounds

1 ton = 2000 pounds

AREA (A) FORMULAS

square . . . . $A = s^2$

rectangle . . . . $A = bh$

OR

$A = lw$

parallelogram . . . . . $A = bh$

triangle . . . . $A = \frac{1}{2}bh$
(b = length of base; h = height)

circle . . . . $A = \pi r^2$
(r = radius)

VOLUME (V) FORMULAS

right rectangular prism . . . . . $V = lwh$
(l = length; w = width; h = height)

OR

$V = Bh$
(B = area of base; h = height)

CIRCLE FORMULAS

area . . . . $A = \pi r^2$

circumference . . . . . $C = 2\pi r$

OR

$C = \pi d$
(d = diameter)