Summer Math for PPA's incoming 5th graders

Student _____

Our fourth graders had a busy year learning new math skills. Mastery of all these skills is extremely important in order to develop a solid math foundation. The fifth grade math program will add onto these fourth grade skills, so any time spent learning or reinforcing these concepts will be very beneficial for your child. Each year builds upon the previous year's skills in math. Any areas your child has difficulty; you may want to give them additional practice. Student mastery of the basic math skills is as important to success in future mathematical procedures and reasoning as learning the alphabet is to reading and writing. Please return this completed packet on your first day in fifth grade teacher.

Excellent websites for fun learning and reinforcement of math skills

-www.wildmath.com Select "Play the game". Select addition, subtraction or multiplication and grade. You can race to beat your time.

-www.aplusmath.com Go under "Flashcards" or "Game Room" on the left side of the screen. They can practice adding, subtracting and multiplying. Very important to know the addition, subtraction and multiplication facts from memorization or within a couple seconds.

-www.mathisfun.com Select numbers then Math Trainer for adding, subtracting and multiplication. Or at the home screen select games and pick a game to play.

-www.aaamath.com At the top pick "Fourth" or "Fifth" for a challenge. Choose any of the activities like multiplication then select "play" option toward the top of the screen. 20 Questions and Countdown games are good ones.

Check list

____ complete 100 math facts once a week

____ complete this whole math packet

____ turn in on the first day of school

Important terms for 5th grade

Edges: This is all the straight lines of a figure. Like the edge of a desk.

Faces: This is the flat surface of a figure.

Vertex: This is all the corners of a figure.

Right angle: An angle at 90 degrees, like a corner of a piece of paper.

Acute angle: An angle smaller than a right angle.

Obtuse angle: An angle larger than a right angle.

Perimeter: You add up all the sides. (You are adding all lengths of the outer edges together.)

Area: *Area of a square or rectangle = length(l) x width(w) answer is written in "square inches" (or whatever the measurement is).

   *Area of a parallelogram is length x height. Answer written in "square inches" (or whatever measurement) | | height Length

   *Area of a triangle is ½ base x height. Answer written in "square inched" (or whatever measurement).

Perpendicular lines: 2 lines form a right angle.

Parallel lines: 2 lines that will never cross each other.

Intersecting lines: 2 lines that cross each other but do not form a right angle.
Mean: This is average. You add the set of number values and divide it by how many numbers you have.

Median: Arrange numbers from smallest to largest. What number is in the middle? That is the Median number.

Mode: What number occurs most often? This number is the mode.

Range: Subtract the largest number in the group from the smallest number in the group. This number is the range.

Equilateral triangle is where all 3 sides of the triangle measure the same length.
Isosceles triangle is where only 2 of the sides of a triangle are equal in length

<u>**Conversion**</u>

60 seconds = 1 minute

24 hours = 1 day

52 weeks = 1 year

60 minutes = 1 hour

7 days = 1 week

12 months = 1 year

12 inches = 1 foot

10 millimeter = 1 centimeters (approx. 3 ½ centimeters = 1 inch)

3 feet = 1 yard

100 centimeter = 1 meter (approx. 1 meter = 1 yard)

5th Grade Summer Math Packet

Select the one best answer for each question. DO NOT use a calculator in completing this packet.

1. Which of the following sets of numbers are all of the factors of 24?

A. 1, 3, 8, 24   B. 2, 4, 6, 8, 12, 24   C. 2, 3, 4, 6, 8, 12
        D. 1, 2, 3, 4, 6, 8, 12, 24

2. Which of the following numbers is a multiple of 8?

A. 18   B. 28   C. 44   D. 56

3. The following are all multiples of a one-digit number: 12, 24, 30, 42.

A. 5   B. 6   C. 7   D. 8

4. Which number is a multiple of 3?

A. 83   B. 84   C. 85   D. 86

5. Which of the following set of numbers are all multiples of 7?

A. 35, 47, 52   B. 35, 36, 37   C. 35, 42, 49   D. 37, 47, 57

6. Al sees this sign at a copy center. What is the least number of copies Al can make without losing any money? $0.10 per copy. Copy machine only takes quarters. Copy machine doesn't make change.

A. 5 B. 30 C. 75 D. 150

7. Which of the following is true about prime numbers?

A. They have exactly two factors

B. One is a factor of every prime number

C. No prime numbers end in zero

D. All prime numbers are odd numbers

8. Which set does NOT contain any multiples of 4?

A. {24, 36, 42, 54} B. {12, 15, 20, 24} C. {8, 16, 24, 34} D. {6, 10, 14, 18}

9. I am a factor of 36 and a multiple of 3. What number am I?

A. 2   B. 4   C. 12 D. 15

10. Since 4 x 10 = 40, and 40 x 5 = 200, then which of the following is true?

A. 14 x 45 = 200   B. 4 x 10 x 5 = 200   C. 4 x 10 x 40 = 200   D. 40 x 10 x 5 = 200

11. My number is a multiple of 5. It is less than 100 and has a factor of 6. What is my number?

A. 25   B. 36   C. 60   D. 66

12. Write the products: see the attached math fact sheet. Complete all 100 math fact problems.

13. Since 5 x 20 = 100, which number will complete the number sentence below to make it true? 5 x _____ x 5 = 100

A. 4   B. 5   C. 20 D. 25

14. Solve 136 − 67.

A. 61 B. 69 C. 71 D. 79

15. Solve 206 – 48.

A. 158   B. 242   C. 162   D. 262

16. Which expression is equal to 3 x 49?

A. 3 x (4 + 9)   B. 3 + (40 x 9)   C. 3 x (40 + 9)   D. (3 x 4) + (3 x 9)

17. Which has the same value as 57 x 4?

A. (50 x 4) + (7 x 4)   B. (50 + 5) + 2   C. (50 x 5) + 2   D. (50 x 4) + 7

18. Which expression is equal to 83 x 5?

A. 80 x (3 + 5)   B. (80 x 5) + (3 x 5)   C. (5 x 80) + 3   D. (80 x 5) + (80 x 3)

19. Solve the following: 2,749 x 68 = _____

20. What is 1486 divided by 3? Show your work.

A. 4,812 r0   B. 495 r1   C. 280 r10   D. 496 r0

21. What is 2520 divide by 10? Show your work.

A. 25,200   B. 2,520   C. 253   D. 252

22. What is the value of this expression? 420 ÷ 4

A. 15   B. 100   C. 105   D. 150

23. There are 168 lunches to be shared equally among 3 fourth-grade classes. How many lunches will go to each class?

A. 56   B. 165   C. 171   D. 504

24. What is the value of this expression? 3750 ÷ 10

A. 370   B. 375   C. 3740   D. 37500

25. Use long division to solve the following problem. 23,422 ÷ 12 = _____

26. If 600 ÷ A = 300, what is A?   A. 200   B. 30   C. 20   D. 2

27. Fill in the blank with the number that makes this math sentence correct:

12 x _____ = 60   A. 7   B. 4   C. 6   D. 5

28. What value of A makes the number sentence true? $100 \div A = 20$

A. 4   B. 5   C. 80   D. 120

29. What value of n makes the equation below true? $n \div 7 = 21$

A. 3   B. 28   C. 141   D. 147

30. Which value of g makes the number sentence true? $g \div 8 = 32$

A. 4   B. 24   C. 40   D. 256

31. What value of p makes the equation below true? $270 \div p = 27$

A. 7   B. 8   C. 9   D. 10

32. Which math problem can be checked using $3 \times 6 = 18$?

A. $18 \times 3 = $ _____   B. $18 + 3 = $ _____   C. $18 \div 3 = $ _____   D. $18 - 3 = $ _____

33. The students in your class collected pop cans to raise money for a class trip. The goal for each student was to collect 150 cans each. There are 27 students in your class. How many cans would that be altogether?

A. 177 cans   B. 405 cans   C. 1350 cans   D. 4050 cans

34. Suppose 33 photos are placed in a photo album. How many pages are needed if 3 photos fit on a page? Show your work.

A. 9 pages   B. 10 pages   C. 11 pages   D. 12 pages

35. Which answer means the same as $12.49?

A. One and two forty nines   B. Twelve and forty-nine

C. Twelve and forty-nine tens   D. Twelve and forty-nine hundredths

36. Mr. Clark was given some change at the grocery store. He was given 5 one dollar bills, 6 quarters, 2 dimes and a penny. How much change did he get?

A. $5.62   B. $6.71   C. $56.21   D. $6.21

37. What decimal part of one dollar is two dimes and two pennies?

A. 2.00   B. 0.20   C. 0.02   D. 0.22

38. What is another way to write 0.7 inches?

A. 7/10000 inches   B. 7/1000 inches   C. 7/100 inches   D. 7/10 inches

39. Which is equal to 0.45?

A.45x100   B.45÷10   C. 0.045x10   D. 0.045x100

40. Which number is the same as one fourth? (think of ¼ of 100 when converting to decimals; think of money)

A. 0.4   B. 0.04   C. 0.25   D. 0.75

41. Which improper fractions represents 1.75?

A. 7/4   B. 4/7   C. 1/75   D. 75/75

42. Solve the following problem: 2 ½ x 3 ¼

A.8 1/3   B. 8 1/8   C. 6 1/8   D. 1 ¾

43. Simplify 14/22. _____

44. Write the following in fraction and decimal form:

Eight tenths = _____ = _____

Twenty-seven hundredths = _____ = _____

Five hundredths = _____ = _____

Five tenths = _____ = _____

45. Write the following fractions in decimal form.

4/10 = _____ 8/10 = _____ 23/100 =_____ 56/100 =_____
8/100 = _____ 5/10 = _____ 66/100 = _____ 2/10 = _____

46. Which number is the same as .5?

A. One half   B. 5/1   C. Five hundredths   D. 5/1000

47. How is eighteen hundredths written in standard form?

A. 0.018   B. 0.18   C. 18.00   D. 1800

48. Solve each of these without using a calculator: 4 x 6 =_____ 8 x 8 =_____

6 x6 =_____ 2 x 9 = _____ 5 x 5 =_____ 9 x 6 =_____ 8 x 5 =_____

2 x 2 =_____ 3 x 4 =_____ 32 ÷ 4 = _____ 7 x 7 = _____ 56 ÷ 7 = _____

72 ÷ 9 = _____ 18 ÷ 2 =_____ 3 x 8 =_____ 45 ÷ 9 = _____ 4 x 4 =_____

49. Choose the equivalent fraction of 1/3.

A. 13/13   B. 3/1   C. 2/6   D. 10/3

50. There are 4 red cars, 5 blue cars, and 2 green cars in the parking lot. What is the fraction of Blue cars in the parking lot?

A. 6/11   B. 5   C. 5/11   D. 11

51. What is the fraction for the "x" part of this set?

X	X	X				

A. 3/8   B. 3/4   C. 3/7

52. Which fraction stands for the part of the set that is "x"?

A. 3/5   B. 5/3   C. 5/8   D. 3/8

X	X	X	X	X			

53. Simplify 12/30?

A. 2/6   B. 6/10   C. 10/28   D. 2/5

54. Simplify 21/49?

A. 20/48   B. 3/7   C. 7/18   D. 21/49

55. How many twelfths equal 5/6?

A. 10/12   B. 11/12   C. 6/12   D. 5/12

56. How many eighths equal ¼?

A. 1/8   B. 2/8   C. 4/8   D. 7/8

57. Which number is an improper fraction?

A. 11/12   B. 5/8   C. 8/5   D. 6/7

58. Convert this improper fraction into a mixed number. 11/2

A. 11 ½   B. 2/11   C. 4 ½   D. 5 ½

59. Solve the following: 3 x 9 = _____ 3 x 6 =_____ 9 x 7 =_____

60. Solve the following: 24 ÷ 3 = _____ 7 x 7 = _____ 56 ÷ 7 = _____

4 x 8 =_____ 48 ÷ 6 = _____

61. Which of the following is a prime number?

A. 21   B. 33   C. 49   D. 53

62. Circle the incorrect equation(s).

A.12x3=36   B. (33-13) x2=40   C. 16x2+4=36   D. 25-5x2=40

63. The distance from home to school is 7/8 of a mile for Amy and 4/8 of a mile from Tom. How much farther does Amy walk than Tom?

A. 11/8   B. 11/16   C. 3/16   D. 3/8

64. Sonya needs ½ teaspoon of salt for her recipe to make rolls. She needs ¼ teaspoon of salt for her recipe to make biscuits. How much salt will she need to make both recipes?

A. 2/6 tsp.   B. 3/4 tsp.   C. 1/8 tsp.   D. 1/6 tsp.

65. Solve for the unknown in this equation: 2/4 + n = 3/4 = _____

A. 5/4   B. 1/2   C. 1/4   D. 5/8

66. How much is 1.35 ÷ 5? Do not use a calculator!

A. .27   B. .35   C. .5   D. 1.7

67. How much is 1.14 ÷ 2? Do not use a calculator. (Line up and move decimal straight up into answer)

A. .7   B. .52   C. .57   D. 1.7

68. Which of the following is closest to the sum of 811 and 356? No calculator☺.
A. 1400   B. 1300   C. 1200   D. 1100

69. Which of the following is closest to the product of 81 and 82?

A. 6400   B. 7200   C. 720   D. 64,000

70. One hundred fourth graders at Beacon Tree Elementary are attending a field day. The teachers need to know how many hot dogs to buy. All the following are reasonable approximations EXCEPT.

 A. 100 hot dogs   B. 150 hot dogs   C. 200 hot dogs   D. 50 hot dogs

71. A cat sleeps an average of 17 hours each day. About how many hours does a cat sleep in a month?

A. 300 hours   B. 600 hours   C. 170 hours   D. 6000 hours

72. Find the difference: 701-66 =_____

73. Find the product: 36 x 37= _____

74. A pencil is about how many centimeters long?

A. 9 ft   B. 10 m   C. 11 cm   D. 12 yards

75. What is the closest to the length of a dinner table?

A. 2 mm.   B. 2 km.   C. 2 m.   D. 2 mi.

76. What is the area of a rectangle with a length of 12 m and a width of 3 m.

A. 15 square m   B. 36 square m   C. 9 square m

77. Which is most likely the length of a telephone book?

A. 30 km   B. 30 cm   C. 30 mm   D. 30 m

78. Brent is sailing in a boat from Hawaii to Florida. Which unit of measure would he use when finding out how far his trip will be?

A. mm   B. dm   C. m   D. km

79. What is closest to the temperature in the Florida summer?

A. 35 degrees C   B. 115 degrees C   C. -57 degrees C   D. 1 degrees C

80. Bobbie was writing an article for the school newspaper about the amount of homework the 4th grade teachers were assigning. He was surprised to find out that the average student only spent 20 minutes per night doing homework. To make it sound longer, he decided to convert the time from minutes to seconds in the article. How many seconds did the average student spend on homework?

A. 80 seconds   B. 120 seconds   C. 800 seconds   D. 1,200 seconds

81. Sheryl planned to buy a wall paper border for her bedroom. She measured the lengths of the walls are 8 ft, 8 ft 7 ft and 11ft. Determine the perimeter.

A. 22 m.   B. 34 ft.   C. 44 ft.   D. 22 ft.

82. Sheryl may want to buy new carpeting for her room. She needs the square footage of the room to take to the store to price how much carpeting would be. What is the area of her room if the width is 12 ft and length is 12 ft?

A. 22 square ft   B. 120 square ft   C. 100 square ft   D. 144 square ft

83. What is the area of a rectangular room that is 9 cm by 6 cm?

A. 18 sq. cm.   B. 22 sq. cm.   C. 32 sq. cm.   D. 54 sq. cm.

84. Find the perimeter of the room?

A. 30 cm   B. 15 cm   C. 30 sq. cm   D. 16 cm

85. What is the area of a room that is 12 ft by 9 ft?

A. 103 square ft   B. 28 square ft   C. 21 square ft   D. 108 square ft

86. Sharon had a rectangular garden with a perimeter of 36 feet. The fence surrounding it was falling down on one of the short sides (width). If the length of the garden was 10 feet, how many feet of fence did she need to replace the broken portion (width) of the fence? Width =? ft. Perimeter = 36 ft. Length = 10 ft.

A. 6 feet   B. 8 feet   C. 10 feet   D. 26 feet

87. What is the area of the rectangle with a width of 12 ft. and length of 5 ft.?

A. 17 square feet   B. 34 square feet   C. 60 square feet   D. 100 square feet

88. If the perimeter of a square is 48 cm, what is the length of each side? (Draw a picture and think of the key word of what type of shape it is.)

A. 8 cm   B. 10 cm   C. 12 cm   D. 24 cm

89. What is the width of a rectangle that has a length of 6 feet and an area of 60 square feet? Draw a picture.

A. 10 feet   B. 12 feet   C. 24 feet   D. 66 feet

90. What is the width of a rectangle with a length of 5 inches and a perimeter of 16 inches? Draw a picture.

A. 2 inches   B. 3 inches   C. 8 inches   D. 21 inches

91. Sarah opens her book. What is the angle formed by the open book?

A. less than a right angle (acute)   B. equal to a right angle
C. greater than a right angle (obtuse) D. can't tell without a pic of the angle

92. Which of the following is closest to 8 x 0.92?

 A. 800   B. 80 C. 8

93. Which is an angle that is less than 90 degrees?

A. acute   B. equal to a right angle   C. obtuse   D. cannot tell

94. What is the measure of a right angle?

A. 180 degrees   B. 90 degrees   C. 45 degrees

95. Lines that will never cross are called _____

A. parallel   B. perpendicular

96. Lines that intersect at making a 90-degree angle are called _____

 A. parallel B. perpendicular

97. Find the difference. 821 - 424= _____

98. Which type of triangle has 2 equal sides?

A. equilateral triangle B. isosceles triangle C. Pyramid D. right triangle

99. Which triangle has three sides that are equal?

A. equilateral triangle   B. isosceles triangle

100. How many vertices does a shoe box have?

A. 3 vertices   B. 8 vertices   C. 10 vertices   D. 18 vertices

How many faces does the box a have?

A. 6 faces   B. 8 faces   C. 10 faces   D. 18 faces

How many edges does the box a have?

A. 3 edges   B. 9 edges   C. 12 edges   D. 18 edges

101. Sharon had a bag of 12 marbles. She gave 8 of the marbles to Don. Which fractional part of the marbles did Sharon have left?

A. 8/12   B. 4/8   C. 4/12   D. ¼

102. Laura wrote 150 words on the first page of her journal. After the second page, she had 200 words. If the pattern continues, how many pages will it take her to write 1000 words? _____

103. Answer the following questions using this set of data. {2, 2, 3, 5, 10, 10, 10}
What is the median?   A. 5   B. 6   C. 7   D. 8

What is the mode?   A. 2   B. 5   C. 8   D. 10

What is the range?   A. 5   B. 6   C. 8   D. 10

104. What is the length of a rectangle with a width of 4 centimeters and a perimeter of 28 centimeters?

A. 7 cm   B. 10 cm   C. 20 cm   D. 24 cm

105. Answer the following questions using this set of data. 8 11 18 11 20 9

What is the median? A. 8 B. 9 C. 11 D. 20

What is the range? A. 8 B. 12 C. 18 D. 20

What is the mode? A. 8 B. 9 C. 11 D. 15

106. Divide 875 ÷ 5=_____

107. Multiply 46 by 78=_____

108. How do you write 45 hundredths as a fraction and decimal?
_____fraction _____decimal

109. The chart below shows the number of minutes that Katie spent on her computer each day for one week. Katie's Computer Time Day Number of Minutes (Sunday 59) (Monday 65) (Tuesday 42) (Wednesday 84) (Thursday 64) (Friday 37) (Saturday 46)

What is the median of the data in the chart? A. 47   B. 53   C. 59   D. 37

What is the range of the data in the chart?   A. 37   B. 47   C. 88   D. 92

110. What is the median? 2,8,4,4,15,7,14   A. 4   B. 7   C. 8   D. 13

111. Place in order from least to greatest? ¼, 1/3, ½, 1/8 _____

112. Do the following divisions.

A. 1524 ÷ 6 =_____

B. 380 ÷ 10 = _____

C. 4235 ÷ 10 = _____

113. Shade 3/5 of the boxes below:

CONGRATULATIONS!!! You have completed the summer math packet. You are now ready for 5th grade success! Please turn this packet into you 5th grade teacher on the first day of school.

Student Name: _____

5th Grade Teacher: _____

I have checked the work completed:

_____ Parent Signature

Remember to review your math facts every week.