FAIRFIELD PUBLIC SCHOOLS

Fairfield, Connecticut

MIDDLE SCHOOL MATH PACKET

GRADE 7

2010

1. A rare specimen weighed 1.08 grams. If the weight increased by 0.01 grams, what would the specimen now weigh?

   a) 1.09 g   b) 1.90 g   c) 9.10 g   d) 19.0 g

2. The length of a brick was 10.5 cm. If the length was decreased by 0.1 centimeters, how long is the brick now?

   a) 9.4 cm   b) 9.5 cm   c)   10.4 cm   d) 10.49 cm

3. Which means the same as 4 + 0.3 + 0.01?

   a) 430.1   b) 43.01   c) 4.31   d) 4.031

4. Which means the same as 1.23×10^3?

   a) 1230   b) 123.0   c) 12.30   d) 1.230

5. 4/5 of Chip's family likes corn. Which decimal number names the same amount?

   a) 4.5   b) 0.45   c) 0.8   d) 0.08

6. Which of the following is equivalent to 7.6 ?

   a) 21/6   b) 7 3/5   c) 76/7   d) 76/100

7. 60 % of Sally's family likes corn. Which decimal number names the same amount?

   a) 0.6   b) 0.66   c) 0.06   d) 6.0

8. Two-thirds of Mrs. Field's class planned to attend the softball game. APPROXIMATELY what percent of the class was that?

   a) 75 %   b) 66 %   c) 99 %   d) 33 %

9. Karl changed 6 % to a decimal in order to determine the amount of tax he would have to pay on his purchase. Which correctly represents 6 % ?

   a) 0.6   b) 0.06   c) 6.0   d) 600

10. 45% of the registered voters cast ballots in a recent election. What fraction of the registered voters is what?

    a) 45/10   b) 4/5   c) 9/20   d) 45/1000

11. This table shows racing times for 4 days.

    Which list shows the days in order from the LEAST number of tickets sold to the GREATEST number of tickets sold?

Day	Speed in Miles/hour
Friday	178.24
Saturday	177.204
Sunday	178.024
Monday	177.24

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a) Saturday, Monday, Sunday, Friday   b) Monday, Saturday, Sunday, Friday

c) Monday, Saturday, Friday, Sunday   d) Saturday, Monday, Friday, Sunday

12. If 58.4 were put into the following lists so that the lists were then ordered from SMALLEST to LARGEST, in which list would 58.4 be the third number?

a) 58.24, 58.39, 58.72   b) 58.1, 59.2, 59.5

c) 58.22, 58.53, 58.75   d) 58.01, 58.03, 58.07

13 John used his computer 4 ¼ hours on Monday, 4 ½ hours on Wednesday and 3 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) Wednesday, Friday, Monday

14. Sue scored between 7.2 and 7.4 points. Which could be the number of points she scored?

a) 7.19   b) 7.24   c) 7.41   d) 7.03

15. Tom rode his bike between 1 ½ and 1 ¾ 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

16. Yesterday Mrs. Mirsky put 17.49 gallons of gas in her car. What is this amount rounded to the NEAREST gallon?

a) 16 gallons   b) 17 gallons   c) 17.5 gallons   d) 18 gallons

17. Last year, 168.78 million tons of garbage were generated. What is this number rounded to the NEAREST tenth?

a) 168.7   b) 168.8   c) 170.0   d) 200.0

18. Levi's dog weighed 15.5 pounds when it was a puppy. He was 3.5 times as heavy when he was an adult. Which number sentence could be used to determine the dog's weight as an adult?

a) 15.5 – 3.5 = ___   b) 15.5 + 3.5 = ____

c) 15.5 / 3.5 = ___   d) 15.5 x 3.5 = ____

19. Steve's average in math is 83.4 % and he increased his average by 5.2 %. Which number sentence could be used to determine Steve's new average?

a) 83.4 – 5.2 = ___   b) 83.4 + 5.2 = ____

c) 83.4 / 5.2 = ___   d) 83.4 x 5.2 = ____

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20. Write a story problem that can be solved using the equation: 18.64 / 0.5 = x

21. Write a story problem that can be solved using the equation: x - 15 = 66

22. Solve this problem: 61.4 - 17.79

23. Solve this problem: 33.24 + 27.4 + 14.78

24. Solve this problem: 5.32 / 10

25. Solve this problem: 3.94 x 1000

26. Solve this problem: 37.4 x 0.8

27. Solve this problem: 564 / 6

28. 15 ¾ + 7 1/4
a) 22   b) 22 2/4   c) 22 4/8   d) 23

29. 6 - 2 3/10
a) 3 7/10   b) 8 3/10   c) 4 3/10   d) 4 7/10

30. 7 x 1/4
a) 1 1/4   b) 1   3/4   c) 1 7/4   d) 4

31. 6 2/5 x 2
a) 12 2/5   b) 12 4/5   c) 24/5   d) 12/5

32. Mike's family pays $21.95 per month for their AOL service. How much does his family pay for
     this service each year?

33. Lauren needs 4 ½ cups of flour for a bread recipe. She only has 2 1/8 cups of flour. How much
     MORE flour does she need?

a) 6 5/8 cups   b) 2 1/6 cups   c) 2 3/8 cups   d) 2 cups

34. When Mr. Smith left on his 3-day trip, the fuel tank in his car was full. During his trip he put in 14 1/4 gallons of gasoline on the first day and then 13 ¾ gallons on the second day. If he bought a total of 45 gallons during the trip, how much did he buy on the third day?

a) 16 gallons   b) 16 ½ gallons   c) 17 gallons   d) 17 ½ gallons

35. Alyssa bought a hat for $13.95 and a pair of gloves for $18.95. She gave the clerk $40. How much change will she get? Solve this problem. Then write 1 or 2 sentences explaining how you got your answer.

36. Danielle needs to subtract 5.79 from 10.9. Which of the following would be BEST for Danielle to use to ESTIMATE the difference?

a) 10 - 6   b) 10 - 5   c) 11 - 5   d) 11 - 6

37. To ESTIMATE the difference of 21.79 and 12.9, Dominique subtracted 22 - 13. Would Dominique's estimate be MORE or LESS than the actual difference?

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

38. Sarah needs to find 49 % of 482. What would be a GOOD ESTIMATE? Explain how you made your estimate.

39. Nancy rode on a bus 38.45 miles the first week of school and 29.85 miles the second week. ABOUT how many miles did she ride on the bus during the two weeks?

a) A little less than 60   b) A little more than 60

c) A little less than 70   d) A little more than 70

40. A 16-pound turkey should cook for ABOUT 5 ¾ hours. If she cooked it another ½ hour, ABOUT how long was it in the oven?

a) A little less than 6 hours   b) A little more than 6 hours

c) A little less than 7 hours   d) A little more than 7 hours

41. The groundskeeper at the ballpark needed dirt to over 380.75 square feet of one field and 590.50 square feet of another. He bought enough dirt to cover 800 square feet of dirt. Explain how you could use ESTIMATION to decide if he bought enough dirt to cover both fields.

42. If the ratio of oil to gas in a lawn mower is 1 to 16, which of these should NOT be used in the mower?

a) 4 parts oil, 64 parts gas   b)   2 parts oil, 32 parts gas

c) 1 parts oil, 8 parts gas   d)   5 parts oil, 80 parts gas

43. A 10-foot tree casts a shadow 4 feet long. How long a shadow will be cast by a 5-foot person?

a) 10 feet   b) 9 feet   c) 2 feet   d) 1 foot

44. Joe worked 6 hours and was paid a total of $27. At this rate, how long would it take Joe to earn $90?

a) 40.5 hours   b) 20 hours   c) 15 hours   d) 3 ½ hours

45. Solve this problem;

   125 % of 80 = ?

46. Solve this problem;

   8 % of 200 = ?

47. Solve this problem;

   45 is what percent of 50?

48. Solve this problem;

Aubrey wanted to leave a 15 % tip at a restaurant. The bill came to $12. What tip should she leave?

49. Solve this problem;

Melissa saved $10 on a $50 pair of shoes. What percent savings is this?

50. Roxanna is 150 centimeters tall. How many meters is that?

   a) 0.500 m   b) 1.5 m   c) 15 m   d) 15,000 m

51. 10 gallons of milk were used when making the chocolate pudding for lunch. How many quarts is this?

   a) 2.5 quarts   b) 20 quarts   c) 5 quarts   d) 40 quarts

52. What is the BEST unit to measure the weight of a truck?

   a) ounces   b) pounds   c) tons   d) grams

53. What is the BEST unit to measure the amount of blood circulating through a person's hand at any one time?

   a) liters   b) milliliters   c) quarts   d) kiloliters

54. Draw a hexagon and then describe what a hexagon is.

55. An ice cream cone is in the shape of an isosceles triangle. Draw a picture of what the cone could look like. Then describe what an isosceles triangle is.

56. Many letters of the alphabet have lines of symmetry. In which pair of letters below does each letter have at least 2 lines of symmetry?

a) D & I   b) C & H   c) A & E   d) H & X

57. Micaela earned $23, $30, $16, and $19 babysitting four weekends last month. What is the average (MEAN) amount earned by Micaela last month? Explain how you got your answer.

58. Lauren had test scores of 84, 94, 96, 49, and 92 on five tests this marking period. What is her MEDIAN score so far this marking period?

a) 82   b) 83   c) 92   d) 96

59. Scott is playing a game with 8 number tiles marked 0, 2, 4, 6, 8, 10, 12, and 14. If he draws one tile, what is the probability that the number will be LESS than 10?
Explain how you arrived at your solution.

60. T. J. is playing a word game with 26 tiles lettered a, b, c, …, z. What is the probability that T. J. will select a vowel (a, e, i, o, u)?

a) 1/26 b) 5/26   c)   21/26   d) 5

61. Write the number that should come next in this pattern. Then write a sentence to explain how you decided what to write.

120, 105, 90, 75, _____