

FAIRFIELD PUBLIC SCHOOLS
Fairfield, Connecticut

MIDDLE SCHOOL MATH PACKET

GRADE 8



2010

1. The volume of a liquid was 2.04 liters. If the amount of liquid was decreased by 0.01 liters, how much liquid do you now have?
a) 1.03 liters b) 2.03 liters c) 3.03 liters d) 20.3 liters

2. A humming bird weighed 12.35 grams. If the weight increased by 0.1 grams, what would the specimen now weigh?
a) 12.35 g b) 12.36 g c) 12.45 g d) 12.46 g

3. Which means the same as $50 + 0.4 + 0.02$?
a) 5.42 b) 54.2 c) 50.42 d) 50.042

4. Which means the same as 5.34×10^6 ?
a) 534,000 b) 5,340,000 c) 53,400 d) 53,400,000

5. Which means the same as 6040?
a) 6.04×10^3 b) 6.4×10^4 c) 60.40×10^5 d) 6.040×10^6

6. $\frac{3}{10}$ of Ed's family eats squash. Which decimal number names the same amount?
a) 3.10 b) 0.310 c) 0.3 d) 0.03

7. Which of the following is equivalent to 7.03 ?
a) $7\frac{3}{10}$ b) $7\frac{3}{4}$ c) $7\frac{3}{100}$ d) $\frac{703}{10}$

8. 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

9. Faby changed 8 % to a decimal in order to determine her raise at work. Which correctly represents 8 % ?
a) 0.08 b) 8.00 c) 0.8 d) 80

10. This table shows average speeds for 4 days.

<u>Day</u>	<u>Miles/hour</u>
Friday	178.24
Saturday	177.204
Sunday	178.024
Monday	177.24

Which list shows the speeds in order from the LEAST to the GREATEST speed?

- a) Saturday, Monday, Sunday, Friday b) Monday, Saturday, Sunday, Friday
c) Monday, Saturday, Friday, Sunday d) Saturday, Monday, Friday, Sunday

11. Whitney read between $1\frac{1}{2}$ and $1\frac{7}{8}$ hours. Which could be the number of hours she read?

- a) $1\frac{3}{8}$ b) $1\frac{5}{8}$ c) $1\frac{3}{16}$ d) $1\frac{15}{16}$

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

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

13. 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

14. Keith had 209 cookies. He wanted to give each student in the community the same number of cookies. If there are 89 students in the community, which number sentence could be used to determine how many cookies each student gets?

- a) $209 - 89 = \underline{\quad}$ b) $209 + 89 = \underline{\quad}$
c) $209 \div 89 = \underline{\quad}$ d) $209 \times 89 = \underline{\quad}$

15. Taimi's bookbag weighed 46.5 pounds when it was a full. Tom's bookbag was 3.5 pounds lighter than Taimi's. Which number sentence could be used to determine the weight of Tom's bookbag?

- a) $46.5 - 3.5 = \underline{\quad}$ b) $46.5 + 3.5 = \underline{\quad}$
c) $46.5 : 3.5 = \underline{\quad}$ d) $46.5 \times 3.5 = \underline{\quad}$

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

$$\frac{3}{4} \times 36 = n$$

17. $15\frac{3}{4} + 7\frac{1}{4}$

- a) 22 b) $22\frac{2}{4}$ c) $22\frac{4}{8}$ d) 23

18. $5\frac{5}{6} - 3\frac{2}{3}$

- a) $2\frac{3}{3}$ b) $2\frac{3}{6}$ c) $2\frac{1}{6}$ d) $2\frac{7}{9}$

19. $\frac{2}{3} \times \frac{3}{4}$

- a) $\frac{5}{12}$ b) $\frac{5}{7}$ c) $\frac{1}{2}$ d) 2

20. Evan needs to multiply 989 by 79,899. Which of the following would be BEST for Evan to use to ESTIMATE the product?

- a) $900 \times 80,000$ b) $900 \times 70,000$
c) $1000 \times 80,000$ d) $1000 \times 70,000$

21. To ESTIMATE the product of 5218 and 6134, Rachel multiplied 5000 x 6000. Would Rachel'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.

22. Sam needs to multiply 39.95 by 1.28. What would be a GOOD ESTIMATE? State your estimate and explain how you made your estimate.

23. Vicky's calculator displayed 23.13. If she added 14.05 to this, ABOUT what is her answer?

- a) A little less than 37 b) A little more than 37
c) A little less than 38 d) A little more than 38

24. The groundskeeper at the ballpark needed dirt to cover 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. State your answer and then explain how you could use ESTIMATION to decide if he bought enough dirt to cover both fields.

25. The weight of a package of chicken is 4.78 pounds. The weight of another package of chicken is 5.45 pounds. How much HEAVIER is the second package from the first?

- a) 0.57 pounds b) 0.67 pounds c) 0.53 pounds d) 0.63 pounds

26. Matt earned \$176, \$132, \$145, \$128 and \$154 in the last 5 months. What was the AVERAGE amount he earned over the 5 months?

27. Susan earned \$ 12 babysitting on Friday and \$ 23 babysitting on Saturday. She wants to buy a pair of shoes that cost \$ 32. Does she have enough money?

28. Allie noticed that there were 16 girls and 12 boys in her class. What is the ratio of girls to boys in her class?

- a) 6 : 2 b) 4 : 3 c) 4 : 7 d) 3 : 7

29. The scale of a map of Connecticut is 1 inch = 8 miles. If the distance from Fairfield to New Haven is $2\frac{1}{2}$ inches on the map, how far is it from Fairfield to New Haven?

- a) 8 miles b) 16 miles c) 20 miles d) 24 miles

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

31. What is the next number in this pattern?

15, 40, 65, 90 _

- a) 95 b) 105 c) 115 d) 125

32. Tommy's teacher sent him shopping for a picnic for his class. Including Tommy and his teacher he had to shop for 24 people. Refer to the chart below.

<u>Item</u>	<u>Size of package</u>	<u>Cost per package</u>
Hotdogs	7	\$ 3.98
Rolls	8	\$ 1.19

Each student can eat at least two hotdogs. Each hotdog must have a bun. The students are to share the cost equally. How much should each student contribute?

Show how you determined how much each student is to contribute.

33. 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
34. What is the BEST unit to measure the amount of water needed to fill a swimming pool?
- a) gallons b) quarts c) pints d) cups
35. Andrea is carpeting her bedroom. The length of the room is 9 feet and the width is 7 feet. How many SQUARE FEET of carpeting will she need?
36. Nathan's yard is 120 feet long and 53 feet wide. What is the PERIMETER of his yard?
37. Draw a rectangle with a PERIMETER of 22 units. Then explain how you got your answer.
38. The Pentagon in Washington is in the shape of a pentagon when looking at it from the sky. Draw a picture of a pentagon. Then describe what a pentagon is.
39. Based on the data in the stem and leaf plot, how many students scored in the 80's?

Scores on Chapter 4 Test

9	4, 6, 7
8	1, 1, 2, 5, 6, 8
7	2, 2, 3, 9
6	0, 2
5	9

- a) 3 b) 4 c) 5 d) 6
40. Bill scored 12, 15, 13, 23, and 18 points in 5 different basketball games. What is the MEDIAN number of points scored during these games?
41. Luke received two 83's on his first two tests this marking period and then received three 93's on the next three tests. What is his AVERAGE in math this marking period?

42. Sort the letters into 2 groups so that the letters in each group have something in common. Then write a sentence that explains how you grouped the letters.

A B E H L O

43. Four children were running in a race. Sam finished before Adam, but after Terry. Mary finished after Sam, but before Adam. Who won the race?

- a) Sam b) Adam c) Terry d) Mary

44. This is a list of the yearly salaries of the ten employees of the Donnelly Company.

Alfie	\$ 85,000
Bob	\$ 11,000
Carl	\$ 16,000
David	\$ 75,000
Esther	\$ 20,000
Francis	\$ 12,000
George	\$ 8,000
Henry	\$ 18,000
Iris	\$ 11,000
Jennifer	\$ 7,000

Find the MEAN, MEDIAN and the MODE for this set of data.

The boss hires two new employees at a salary of \$ 9,000 each. Explain what will happen to the MEAN, MEDIAN and the MODE with the new employees.

45. Micaela earned \$23, \$30, \$16, and \$19 babysitting four weekends last month. What is the MEAN amount earned by Micaela last month? On your answer sheet, state the MEAN and then explain how you got your answer.

46. $16 \div (2 - 1) =$

- a) 6 b) 7 c) 8 d) 16

47. $4 + 6 \times 8 =$

- a) 18 b) 32 c) 52 d) 80

48. In this formula, C represents the total charge for babysitting, and H represents the number of hours the child stays with the babysitter. How much should Valerie pay if her child is at the babysitting service for 3 hours?

$$C = \$ 5.25 + \$2.50H$$

- a) \$ 7.75 b) \$ 12.75 c) \$ 14.25 d) \$ 23.25

49. Mike just bought M baseball trading cards. He sold 6 to his friend. Which expression represents how many new trading cards he has left?

- a) $6 - M$ b) $6M$ c) $M + 6$ d) $M - 6$

50. Solve this equation.

$$X - 8.6 = 57.52$$

51. Solve this equation.

$$12X = 96$$

52. Allie received \$ X for her birthday. David received 3 times as much. On your answer sheet, write an expression to represent how much David received.

53. Francesca received \$ X for her birthday. Zina gave her \$ 20 more. On your answer sheet, write an expression to represent how much Francesca has now.