

Math Practice: Incoming Sixth Grade Students

During the summer months it is important that you practice the Math skills which you have learned this school year. There are many online resources which are available and may be beneficial to you. I recommend that you use the **free resources** which are provided by Sadlier, the publisher of the text book we used in class. After practicing the skills, complete your packet and bring it to school in September.

To access these resources:

1. Go to: <https://www.sadlierconnect.com/login.html>
2. Type the zip code (08009) for our school in the Login box. Then select: Our Lady of Mt Carmel School
3. On the lower right corner of the screen you will see Student & Family Resources. Click "*Let's Go*".
4. Here you will see a list of available programs. You will be using *Progress in Mathematics* (Grades K-9) which is located in the right hand column. Click that program.
5. You will find a list of the grade level programs. Click on the Grade 5 selection which is located on the right hand side.
6. This brings you to a page which includes Skills Update (the skills review of grade 4 skills), Chapters 1-14 of the 5th grade book, and Fluency Practice. You are able to select the topics yourself and can print the pages to work on or in some cases do the work on your computer. If you have forgotten how to complete the problems, you are able to see instruction and vocabulary. In *Fluency Practice*, there are games which give lots of practice with basic facts and all of the operations which you will need to use as you move on in our study of Mathematics.

Grade 6, Beginning of Year Worksheet

Multiple Choice

1. Which number sentence is in the same fact family?

$9 + 1 = 10$

- a. $9 - 1 = 8$
- b. $10 - 1 = 9$
- c. $1 + 8 = 9$

2. What is the missing part of the fact family?

$8 + 7 = 15$

$7 + 8 = 15$

$15 - 8 = 7$

- a. $8 + 8 = 16$
- b. $6 + 9 = 15$
- c. $13 - 6 = 7$
- d. $15 - 7 = 8$

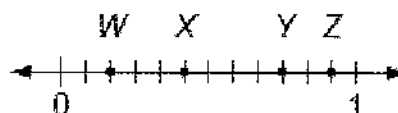
3. Choose the related addition fact for $1 + 4 = 5$.

- a. $4 + 1 = 5$
- b. $1 + 4 = 4$
- c. $1 + 4 = 5$
- d. $5 + 0 = 5$

4. Tabitha wants to show the unit fraction $\frac{1}{9}$ on a number line. How many equal parts must the number line show between 0 and 1?

- a. 1
- b. 8
- c. 9
- d. 10

5. Which point on the number line shows the fraction $\frac{5}{12}$?



- a. Z
- b. W
- c. Y
- d. X

6. David has 5 boxes of pencils with 3 pencils each. Richard has 3 boxes of pencils with 5 pencils each. Which statement is true?

- a. David has more pencils.
- b. Richard has more pencils.
- c. They both have 15 pencils.

Grade 6, Beginning of Year Worksheet

7. Tamara uses the Distributive Property to find a product. Which number is missing from her work?

$$\begin{aligned} 3 \times 9 &= (3 \times 2) + (3 \times \underline{\quad}) \\ &= 6 + 21 \\ &= 273 \end{aligned}$$

- a. 2
- b. 7
- c. 9
- d. 14

8. Maria has 12 buttons and 4 boxes. She puts the same number of buttons in each box. How many buttons does Maria put in each box?

- a. 3
- b. 4
- c. 8
- d. 16

9. Which number completes both sentences?

$$\begin{aligned} 18 \div 2 &= ? \\ ? \times 2 &= 18 \end{aligned}$$

- a. 9
- b. 2
- c. 18
- d. 16

10. Kelly has juice with her breakfast. How much juice does Kelly most likely drink?

- a. 6 cups of juice
- b. 6 fluid ounces of juice
- c. 5 quarts of juice
- d. 11 pints of juice

11. Complete the table. Which list shows equivalent measures in grams?

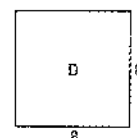
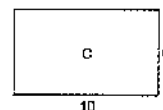
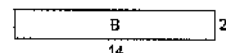
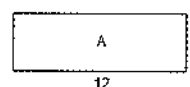
Kilograms	Grams
1	
2	
3	
4	

- a. 1000; 2000; 3000; 4000
- b. 100; 200; 300; 400
- c. 10; 20; 30; 40
- d. 1; 2; 3; 4

12. Mrs. Jimenez has 5 quarts of lemonade. How many 1-cup servings does she have?

- a. 40 servings
- b. 20 servings
- c. 30 servings
- d. 10 servings

13. The four rectangles all have the same perimeter. Which rectangle has the greatest area? Use the area formula.



- a. A
- b. B
- c. C
- d. D

Grade 6, Beginning of Year Worksheet

14. Two rectangles have the same area. One rectangle has a length of 2 cm and a width of 4 cm. Which could be the length and width of the other rectangle?

- a. length = 1 cm; width = 8 cm
- b. length = 3 cm; width = 5 cm
- c. length = 4 cm; width = 4 cm
- d. length = 2 cm; width = 6 cm

15. Use a bar diagram to solve the problem.

Ali has 3 nickels. Fiona has 5 times the number of nickels as Ali. How many nickels does Fiona have?

- a. 8 nickels
- b. 15 nickels
- c. 8 nickels
- d. 18 nickels

16. Paul lives 9 miles from the state capital. Guy lives 8 times as far from the state capital as Paul does. How far does Guy live from the state capital?

- a. 72 miles
- b. 63 miles
- c. 17 miles
- d. 64 miles

17. Is 10 a prime number or a composite number?

- a. composite number
- b. prime number

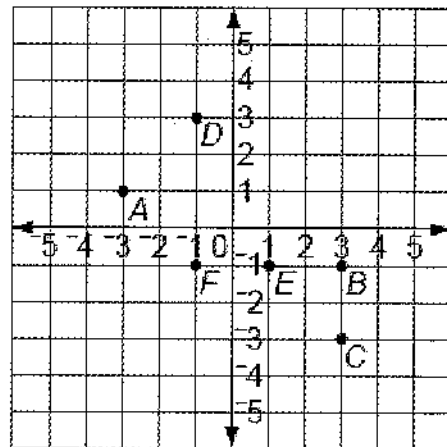
18. Which is the least common multiple of 4 and 11?

- a. 44
- b. 15
- c. 88
- d. 22

19. Which lists the first four common multiples of 3 and 9?

- a. 3, 9, 12, 18
- b. 3, 6, 9, 12
- c. 9, 18, 27, 36
- d. 9, 12, 15, 18

Use the grid to answer the question.



20. Which point's location is given by the coordinates $(-1, 3)$?

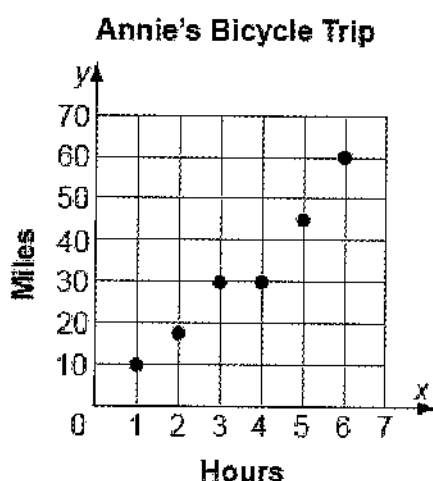
- a. D
- b. E
- c. B
- d. F

Grade 6, Beginning of Year Worksheet

21. Which coordinates name the location of point E?

- a. $(-3, 1)$
- b. $(-1, -1)$
- c. $(1, -1)$
- d. $(3, -1)$

Use the grid to answer the question.



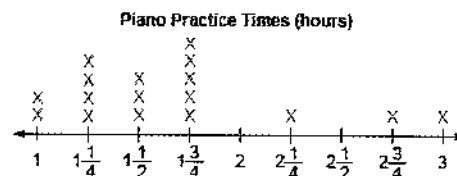
22. What does the point $(5, 45)$ mean?

- a. In 5 hours, Annie biked 45 miles.
- b. Annie's bicycle trip was 45-miles long.
- c. In 45 minutes, Annie biked 5 miles.
- d. Annie's bicycle trip was 5 hours long.

23. How long did it take Annie to bike 10 miles?

- a. 2 h
- b. 3 h
- c. 1 h
- d. 5 h

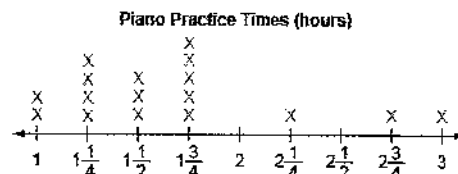
24. The line plot shows the number of hours 17 students spent practicing piano.



Which is the median of the data set?

- a. $1\frac{3}{4}$ hours
- b. $\frac{1}{4}$ hour
- c. $1\frac{1}{2}$ hours
- d. 2 hours

25. The line plot shows the number of hours 17 students spent practicing piano.



How many students practiced for less than $1\frac{3}{4}$ hours?

- a. 5
- b. 9
- c. 14
- d. 3

Grade 6, Beginning of Year Worksheet

26. A rectangular prism is 7 feet tall. Its base is 10 feet long and 3 feet wide, and it has an area of 30 square feet. What is the volume of the rectangular prism?

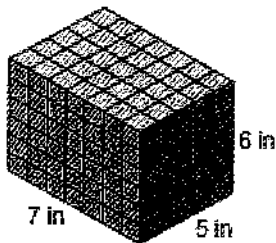
- a. 20 cubic feet
- b. 50 cubic feet
- c. 210 cubic feet
- d. 223 cubic feet

27. Rename the unit of measure.

$$5 \text{ dm}^3 = \underline{\hspace{1cm}} \text{ cm}^3$$

- a. 0.5
- b. 50
- c. 500
- d. 5,000

28. Which is the volume of this rectangular prism?



- a. 18 in.^3
- b. 37 in.^3
- c. 210 in.^3
- d. 228 in.^3

29. What is the missing exponent?

$$10^{\square} = 10,000$$

- a. 1
- b. 2
- c. 3
- d. 4

30. What is the product?

$$1,580 \times 671 = ?$$

- a. 22,120
- b. 1,058,937
- c. 1,060,180
- d. 1,059,180

31. What is the product?

$$\begin{array}{r} 90,604 \\ \times \quad 2 \\ \hline \end{array}$$

- a. 181,208
- b. 18,128
- c. 19,208
- d. 1,928

32. There are about 54,387 cars produced every 9 minutes worldwide. About how many cars are produced each minute?

- a. 6,009 R6
- b. 643
- c. 6,043
- d. 6,403

Grade 6, Beginning of Year Worksheet

33. What is the quotient?

$$9 \overline{)5,450}$$

- a. 610
- b. 605
- c. 604 R14
- d. 605 R5

34. What is the quotient?

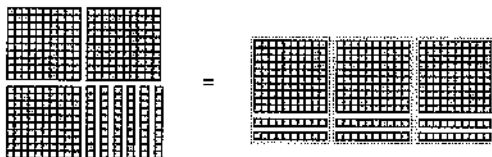
$$4 \overline{)487}$$

- a. 120 R7
- b. 124
- c. 121 R3
- d. 121

35. Sharon walked 0.65 mi to the library and 0.8 mi to the park. How far did she walk in all?

- a. 0.15 mi
- b. 7.3 mi
- c. 0.73 mi
- d. 1.45 mi

36. Enrico uses base-ten blocks to model $3.6 \div 1.2$.



Which is the quotient?

- a. 1.2
- b. 0.3
- c. 4
- d. 3

37. Which is the difference?

$$10 - 3\frac{5}{12} = ?$$

- a. $7\frac{5}{12}$
- b. $6\frac{7}{12}$

c. $9\frac{7}{12}$

d. $13\frac{5}{12}$

38. Which is the difference?

$$\frac{9}{11} - \frac{2}{3} = ?$$

a. $\frac{7}{8}$

b. $\frac{5}{14}$

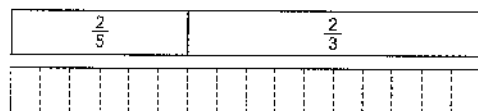
c. $\frac{5}{33}$

d. $\frac{25}{33}$

Grade 6, Beginning of Year Worksheet

39. Use the model to find the sum.

$$\frac{2}{5} + \frac{2}{3} = ?$$



- a. $\frac{1}{2}$ b. $1\frac{1}{5}$
c. $1\frac{5}{8}$ d. $1\frac{1}{15}$

40. Meg and her friends share some pizzas equally. Each person gets $\frac{3}{4}$ of a pizza. How are the pizzas shared?

- a. $\frac{3}{4}$ pizza divided among 3 people
b. $\frac{3}{4}$ pizza divided among 4 people
c. 3 pizzas divided among 4 people
d. 4 pizzas divided among 3 people

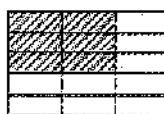
41. There are 58 people at a family picnic. Each table has 8 people sitting at it except for the last table. What part of the last table is full?

- a. $\frac{1}{4}$
b. $\frac{3}{4}$
c. 2
d. 8

42. Henry has 61 pounds of fruit that he is putting in boxes. He puts 5 pounds of fruit in each box. How many boxes does Henry need for all of the fruit?

- a. 12 boxes
b. $12\frac{1}{12}$ boxes
c. $12\frac{1}{5}$ boxes
d. 13 boxes

43. Which statement matches the diagram?



- a. $\frac{1}{3}$ of $\frac{3}{5} = n$
b. $\frac{2}{3}$ of $\frac{3}{5} = n$
c. $\frac{6}{9}$ of $\frac{9}{15} = n$
d. $\frac{6}{15}$ of $\frac{9}{25} = n$

44. Missy has 2 pounds of flour. She uses $\frac{1}{3}$ of it in a recipe. How many pounds of flour does she use?

- a. $\frac{1}{3}$
b. $\frac{1}{2}$
c. $\frac{2}{3}$
d. $\frac{3}{3}$

Grade 6, Beginning of Year Worksheet

45. Which expression is equivalent to $2 \times \frac{3}{5}$?

- a. $(2 \times 3) \div 5$
- b. $(2 \times 5) \div 3$
- c. $(3 \times 5) \div 2$
- d. $2 \div (3 \times 5)$

46. Which fraction will make this statement true?

$$\frac{4}{5} \times \underline{\hspace{1cm}} < \frac{4}{5}$$

- a. $\frac{2}{3}$
- b. $\frac{5}{5}$
- c. $\frac{5}{4}$
- d. $\frac{9}{5}$

47. Will the product of the fractions be less than, equal to, or greater than the first factor?

$$\frac{6}{11} \times 4$$

- a. less than
- b. equal to
- c. greater than

48. The city has $\frac{3}{4}$ ton of sand to use for sandboxes in 10 playgrounds. If each playground receives an equal amount of sand, how much sand should each playground receive?

- a. $\frac{3}{40}$ ton
- b. $\frac{5}{6}$ ton
- c. $7\frac{1}{2}$ tons
- d. 10 tons

49. Which story describes $\frac{3}{4} \div 2$?

- a. Lia divides a $\frac{3}{4}$ -acre field into 2 sections.
- b. Lia divides a 2-acre field into $\frac{3}{4}$.

50. Which word phrase is equivalent to the algebraic expression?

$$n \times (4 + 2) - n \times (8 - 3)$$

- a. the difference of a number times the sum of 4 and 2 and the product of a number and the difference of 8 and 3
- b. a number times 4 plus 2 minus the product of a number and the difference of 8 and 3
- c. the product of a number and the sum of 4 and 2 and the product of a number and the difference of 8 and 3
- d. a number times 4 plus 2 minus a number times 8 minus 3

51. Which of these is an algebraic expression?

- a. $4p = 12$
- b. $3 + 5n$
- c. $25 = x - 10$
- d. $3 + n = 7$

52. Which property of equality is used?

$$6 \times 5 = 3 \times 10$$

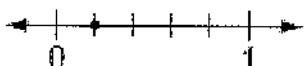
$$(6 \times 5) \div 2 = (3 \times 10) \div 2$$

- a. Addition Property of Equality
- b. Subtraction Property of Equality
- c. Multiplication Property of Equality
- d. Division Property of Equality

Grade 6, Beginning of Year Worksheet

Numeric Response

53. Which fraction is shown by the point on the number line?



54. Maria is planting a garden that is 15 ft long and 12 ft wide. What is the area of the garden?
55. Marci has 25 baseball cards. Julie has 4 times as many baseball cards. How many baseball cards does Julie have?
56. A rectangular jewelry box is 6 centimeters tall and has a base area of 28 square centimeters. What is the volume of the box in cubic centimeters?
57. A reflecting pool has the shape of a rectangular prism. It is 13 feet long, 13 feet wide, and 2 feet deep. What is the volume of the pool in cubic feet?
58. There are 20 seats on a bus. Each seat holds 3 people. How many people can ride the bus?
59. What is 10^2 ?
60. A television series has 56 episodes in all. Each episode is 27 minutes long. How many minutes long is the entire television series?
61. What is the product?

$$\begin{array}{r} 15.6 \\ \times 0.15 \\ \hline \end{array}$$