

Online Math Practice

Incoming 7th and 8th grade Standard & Advanced Math

Please access the following resources for ongoing review throughout the summer. The summer packets which are posted are taken directly from the Sadlier math series, so that site should be your primary resource. Remember, summer work is taken from the grade just completed so that skills are kept sharp for September.

- Go to <http://www.sadlierconnect.com/login.html>
- Type the zip code (08009) for our school in the Login box. Then select: Our Lady of Mt. Carmel School. Ignore the login and password boxes.
- On the lower right corner of the screen you will see Student & Family Resources. Click "Let's Go."
- 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; 5th one down. Click that program.
- You will find a list of the programs. Click on the appropriate selections and Explore the many topics and options!

7th grade standard: Progress in Mathematics, grade 6

7th grade advanced: Fundamentals of Algebra, grade 7

8th grade standard: Fundamentals of Algebra, grade 7

8th grade advanced: Foundations of Algebra, grade 8

Other site to consider:

ixl.com

mathplayground.com

khanacademy.org

Name Entering 8A

Find the greatest common factor (GCF) and least common multiple (LCM).

1. 36 and 48

2. 26 and 39

3. 12 and 35

Order from least to greatest.

4. $-\frac{4}{9}, -\frac{6}{11}, -\frac{2}{7}$

5. 50.53, 50.05, 5.05, 55.3

6. $\sqrt{40}, \frac{17}{3}, 5.9$

Simplify.

7. $\frac{3(85 - 4)}{9} - \frac{(-5)^3 + 5}{5}$

8. $(\frac{5}{6} \cdot \frac{3}{5})^2 - 2 + \frac{2}{7}(-\frac{7}{8})$

9. $\sqrt{3.24} + (0.05)^2$

Multiply or divide.

10. $(2.6 \times 10^4)(6.4 \times 10^8)$

11. $\frac{3.45 \times 10^9}{1.25 \times 10^3}$

12. $(8.86 \times 10^{-4})(4.3 \times 10^2)$

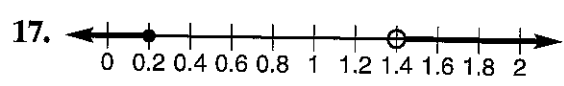
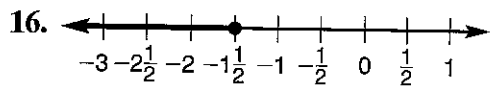
Solve.

13. $\frac{1}{2}(m + 4) = -\frac{3}{4}$

14. $|\frac{r}{4} + 5| = 18$

15. $-2\frac{1}{2}y + y > -8 + 18$

Write an inequality or compound inequality for each graph.



Rename each decimal as a fraction or mixed number in lowest terms.

18. $0.\overline{26}$

19. $3.0\overline{9}$

20. $1.\overline{123}$

Find the sum or product. Write each answer in standard form.

21. $(7x^3 - 2x^2) + (-2x^3 + 8x)$

22. $-3x^4(4x^5y^2 - 6xy^3 + 9)$

23. $(3x + 5)(5x - 2)$

Use the given information to write an equation of the line in slope-intercept form.

24. slope $m = \frac{9}{10}$ with
 $(-3, 2)$

25. contains points $(-8, 3)$
 and $(5, 5)$

26. Perpendicular to the line
 $-6x + 2y = 15$, and passes
 through point $(0, 8)$

Solve for x .

27. $\frac{3x + 2}{8} = \frac{9}{5}$

28. $\frac{\$8.16}{3 \text{ lb}} = \frac{x \text{ dollars}}{1 \text{ oz}}$

29. scale: 10 cm : x mi
 scale measure: 4.5 cm
 actual measure: 180 mi

Find the missing value.

30. 124% of 42 is
 what number?

31. 76 is what percent of
 15,200?

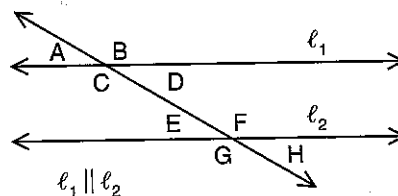
32. 14 is 35% of
 what number?

33. Price: \$345.60
 Tax Rate: 7.5%
 Sales Tax: ?

34. Original: 64.45
 New: 77.34
 Percent change: ?

35. Simple interest: \$163.80
 Rate: 4.2%
 Time: 18 months
 Principal: ?

Use the diagram at the right to answer questions 36–38.



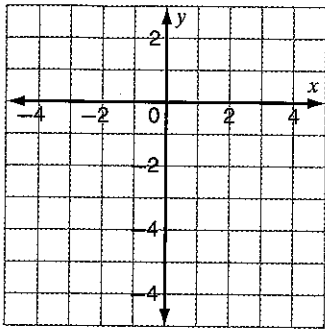
36. Which pairs of angles are
 corresponding angles?

37. Which pairs of angles are
 alternate interior angles?

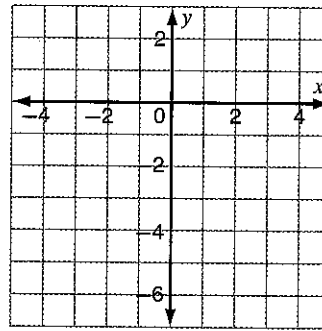
38. If $m\angle A = 43^\circ$, what
 is $m\angle C$?

Graph each function.

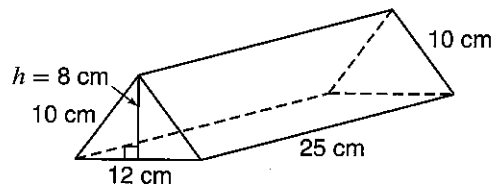
39. $f(x) = 2x - 5$



40. $g(x) = \frac{1}{4}x^2 - 1$



Use the figure at the right for exercises 41–43.



41. Name the polyhedron.

42. Find the surface area of the figure.

43. Find the volume of the figure.

On a sheet of paper, make a stem-and-leaf plot to represent the data below. Use it for exercises 45–47.

44. July high temperatures in New York:
75°, 78°, 83°, 86°, 93°, 93°, 96°, 85°, 86°,
92°, 93°, 98°, 89°, 86°, and 79°

45. What is the mean?
Round to the nearest tenth.

46. What is(are) the mode(s)?

47. What is the median?

A 1–6 number cube is rolled. Express each probability as a percent.

48. $P(8)$

49. $P(1, 2, \text{ or } 3)$

50. The cube is rolled twice.
 $P(4 \text{ and then odd})$

Write the converse of each statement.

51. If it is Thanksgiving, school is closed.

52. If I am offered the job, I will take it.

Solve. Show your work.

53. The number of payments varies inversely with the amount of equal payments. If the number of payments is 36 when the amount of each payment is \$240, how much will each payment be if 48 payments are made?

55. The relationship between a temperature in degrees Celsius (C) and the temperature in degrees Fahrenheit (F) is given by the formula $F = 1.8C + 32$. Overnight the temperature fell 12°F . The morning temperature was 15°C . What was the temperature in degrees Fahrenheit before it fell?

57. The Eiffel Tower is 984 feet tall. Looking through binoculars from the top, at a 60° angle of depression, John sees his friend. How far away from the base of the tower is John's friend. Round to the nearest foot. Use a trigonometric ratio and a calculator.

59. Mark bought a shirt on sale for 25% off. Originally the shirt was \$50.00. Mark had a coupon for an additional 20% off. How much did Mark pay for the shirt?

54. The employees at Harry's House of Hamburgers have the following weekly salaries: \$210, \$250, \$250, \$350, \$375, \$400, \$800, \$1000. Which measure of central tendency would you use if you wanted to describe the typical salary? Why?

56. A 20-foot ladder just reaches the top of a building. The ladder's base is 12 feet from the building. How tall is the building?

58. An ice cream shop offers customers 10 flavors of ice cream, 2 types of cones, and 5 toppings. Find the number of possible ice cream cone choices when a customer selects 1 cone, 1 scoop of ice cream, and 1 topping.

60. A rectangular cracker has an area of 22 cm^2 . Using 3.14 for π , what is the diameter of a circular cracker with the same area? Round to the nearest tenth.
