

## Online Math Practice

### Incoming 7<sup>th</sup> and 8<sup>th</sup> 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!

7<sup>th</sup> grade standard: Progress in Mathematics, grade 6

7<sup>th</sup> grade advanced: Fundamentals of Algebra, grade 7

8<sup>th</sup> grade standard: Fundamentals of Algebra, grade 7

8<sup>th</sup> grade advanced: Foundations of Algebra, grade 8

Other site to consider:

[ixl.com](http://ixl.com)

[mathplayground.com](http://mathplayground.com)

[khanacademy.org](http://khanacademy.org)



Name Entering 7A & 8S

**Simplify.**

1.  $-48 \div (-6) + 2$

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2.  $4^2 + 3(-2) - 12 \div 2$

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3.  $5^{-3}$

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**Solve.**

4.  $14 - 8x = 78$

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5.  $35 = 10x \div 2$

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6.  $-10 + c \geq 4$

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7.  $50 < -4y$

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8.  $14.2x - 10 = 61$

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9.  $4.3d - \frac{1}{5} = 38.5$

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**Compare. Write <, =, or >.**

10.  $-6.004$  \_\_\_\_\_  $-6.0034$

11.  $\frac{3}{50}$  \_\_\_\_\_  $0.3$

12.  $1\frac{3}{5}$  \_\_\_\_\_  $-1.4$

**Compute.**

13.  $\frac{5}{6} + \frac{1}{3} - \frac{1}{2}$

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14.  $2\frac{1}{8} \div \frac{1}{8}$

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15.  $5(1\frac{3}{4} - 2) + \frac{7}{8} \cdot 3^2$

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**Solve for x.**

16.  $3\frac{1}{3}x + 25 = 30$

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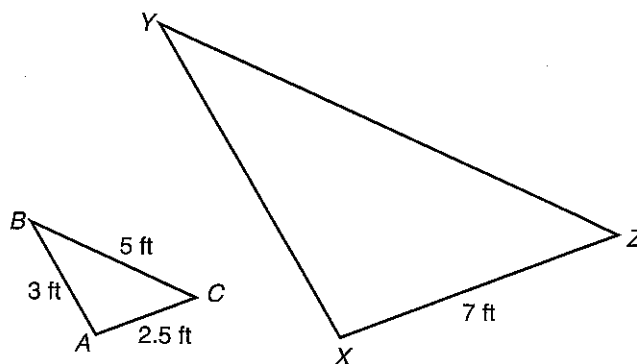
17.  $4.6 = 13\frac{4}{5} - \frac{2}{5}x$

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Triangle  $ABC$  is similar to triangle  $XYZ$ .  
Find each missing length.

18.  $\overline{XY}$  \_\_\_\_\_

19.  $\overline{YZ}$  \_\_\_\_\_



Solve.

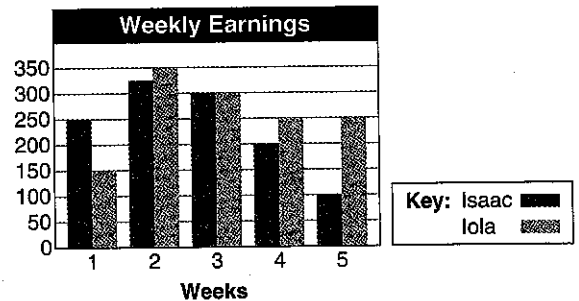
20. 8% of what number is 3?

21. What is the percent of decrease from 50 to 30?

22. Sales tax is 6.25%. What is the tax on a \$230 bill?

Use the graph to answer questions 23–24.

23. During which week did Isaac earn more than Iola? How much more?

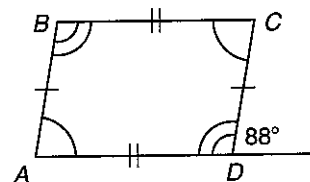


24. After five weeks, Isaac and Iola put their money together to buy a boat. What percent of the amount was earned by Iola? Round to the nearest tenth of a percent.

Use the diagram at the right for questions 25–26.

25. What is  $m\angle B$ ?

26. What is the name that best describes this quadrilateral?



Find the area of each figure to the nearest tenth. Use 3.14 for  $\pi$ .

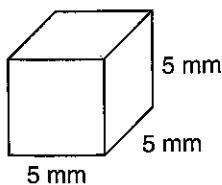
27. a parallelogram with a base of 31.5 ft and a height of 12 ft

28. a circle with a circumference of 18.84 in.

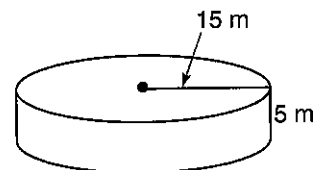
29. a trapezoid with bases of 15 mm and 12 mm and a height of 20 mm

Find the surface area and volume of each figure to the nearest tenth. Use 3.14 for  $\pi$ .

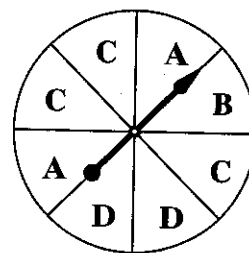
30.



31.



Use the spinner for questions 32–33. Write the probability of each event as a fraction, decimal, and percent.



32.  $P(C)$

33.  $P(\text{not } D)$

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A bag contains 3 red crayons, 2 purple crayons, and 5 orange crayons. Write the probability of each compound event.

34.  $P(\text{red, then purple})$  if the first crayon is replaced in the bag

35.  $P(\text{orange, then red})$  if the first crayon is not replaced in the bag

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Find the slope of the line that passes through each pair of points.

36.  $(-2, 3)$  and  $(2, 6)$

37.  $(-7, 25)$  and  $(-6, 20)$

38.  $(-15.2, -1.3)$  and  $(6.8, -8.3)$

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Evaluate each expression for  $a = 3$ ,  $b = -6$ ,  $c = 4.2$ .

39.  $a^2 - 2b + (3c \div a)$

40.  $15a(b^2 - c) + 3$

41.  $ab^2c + (a - b)^2$

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Simplify.

42.  $(k - 19) + (7k - 3)$

43.  $(n^3 + 10n^2) - (n^3 - 13n^2)$

44.  $2y^3(3 - 7y + 4y^2)$

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Solve.

45.  $12(-4x + 9) = 16 - 2x$

46.  $-2(10 - 5g) - 4g = 9 + 16g$

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**Solve. Show your work.**

47. Marcia is framing an 8 inch by 10 inch picture. The frame is 2 inches wide. How much wall space will the framed picture cover?

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48. Theo and Vanessa start at the same place and bike in opposite directions. Theo bikes 2.2 km every 15 minutes, and Vanessa bikes 3.9 km every 20 minutes. How far apart are they after one hour?

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49. How much is owed after 48 months on a \$450 loan if the rate of simple interest is 4.5%?

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50. Lemuel scored 99, 86, 94, 88, 79, 85, and 82 on his algebra tests. After his next test, his mean score was 87.5. What was his eighth test score?

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51. DeSheila's rectangular garden has an area of 112 square feet with a width of 8 feet. She wants to build a path diagonally across the garden. How long will the path be? Use a calculator and round to the nearest tenth, if necessary.

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52. Mr. Jaffrey has 16 students in his soccer camp. He is choosing two students to be the captains of two teams. How many different combinations of students could be team captains?

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53. A storage cube has a volume of  $(3x^4 + 9x^2 + 6x^3)$  cubic feet, a length of  $x$  feet, and a width of  $3x$  feet. What is the height of the box?

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54. Jabari, Felipe, and Bria scored 28 total points. Jabari scored three more than twice as many as Felipe. Bria scored one more than three times as many as Felipe. How many points did Felipe score?

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