

Dear Parents,

With summer vacation rapidly approaching, schoolwork is about to come to an end. Although summer is a time for fun and relaxation, and much needed after these past three months, you know how much your child can lose academically over the summer. Your children have grown by leaps and bounds during the school year and it is essential to practice and reinforce all that they have learned, especially in math. Because math is built on previously taught skills, the students will be given a packet to complete over the summer; The packet is a review of previously taught skills. This will help them be prepared to move right into 8th-grade math. The students can refer to online tutorials if they need help. We are also available if they have any questions. **The packet will be due on Thursday, August 29, 2024, and will be counted as their first test grade.**

Thank you for your support and cooperation. Enjoy your summer and well-earned rest!  
Stay safe; see you in August.

Mr. Adamsky & Mrs. Lambert



Name \_\_\_\_\_

Gr. 7-8

*\*Must show all work\**

**Simplify.**

1.  $8(-3) + 14$   
\_\_\_\_\_

2.  $3^2 - 2(-2) + 1$   
\_\_\_\_\_

3.  $2^{-2}$   
\_\_\_\_\_

**Solve.**

4.  $-9x = 72$   
\_\_\_\_\_

5.  $40 = \frac{x}{2}$   
\_\_\_\_\_

6.  $c - 10 \geq 15$   
\_\_\_\_\_

7.  $-45 < 9y$   
\_\_\_\_\_

8.  $15x + 16 = -29$   
\_\_\_\_\_

9.  $18 = -3y - 12$   
\_\_\_\_\_

**Write each as a decimal.**

10.  $\frac{40}{100}$   
\_\_\_\_\_

11.  $-\frac{3}{5}$   
\_\_\_\_\_

12.  $2\frac{1}{8}$   
\_\_\_\_\_

**Compute.**

13.  $\frac{3}{10} + \frac{3}{5} - \frac{1}{5}$   
\_\_\_\_\_

14.  $1\frac{1}{4} \div \frac{1}{3}$   
\_\_\_\_\_

15.  $3(2\frac{1}{2} - 1) + \frac{3}{10}$   
\_\_\_\_\_

**Solve for x.**

16.  $3\frac{1}{3}x = 29$   
\_\_\_\_\_

17.  $15 = \frac{20}{31}x$   
\_\_\_\_\_

**Use the following information for questions 18 and 19.**

Connor makes \$120 for every 10 hours he works.

18. How much does Connor make per hour?  
\_\_\_\_\_

19. If Connor earns \$300, how many hours has he worked?  
\_\_\_\_\_

Solve.

20. What is 9% of 25?

\_\_\_\_\_

21. What is the percent of decrease from 125 to 25?

\_\_\_\_\_

22. Sales tax is 10.25%. What is the tax on a \$300 bill?

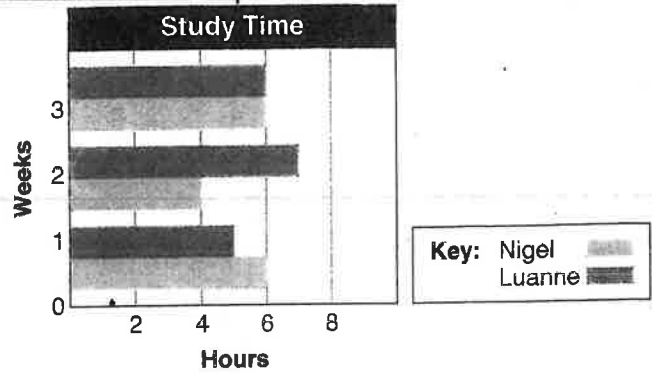
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Use the graph to answer questions 23 and 24.

*\*2 answers*

23. During which week did Nigel study more than Luanne? How much more?

\_\_\_\_\_



24. Over the three weeks, how many hours did Nigel study in all? Luanne?

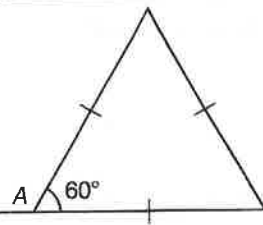
Nigel 7 | Luanne 7

Use the diagram for questions 25 and 26.

25. What is  $m\angle A$ ?



26. Classify the triangle by its angles and sides.



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

27. a rectangle with sides of 5 mm and 12 mm

\_\_\_\_\_

28. a circle with a diameter of 18 m

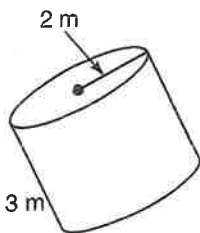
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29. a parallelogram with a base of 25 ft and a height of 20 ft

\_\_\_\_\_

Find the surface area and volume of each figure using the given formulas.

30.



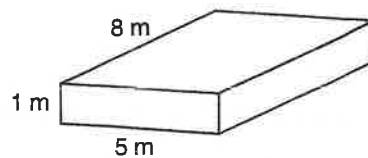
$$S = 2\pi r^2 + 2\pi rh$$

$$V = \pi r^2 h$$

Use 3.14 for  $\pi$ .

\_\_\_\_\_

31.



$$S = 2lw + 2lh + 2wh$$

$$V = lwh$$

\_\_\_\_\_

Solve. Show your work.

48. Ms. Costello borrows \$5000 from a bank that charges 9.25% interest per year. What is her total amount due after one year?

49. The 8<sup>th</sup> grade sells popcorn after school. The 2-cup container is \$0.89, the  $2\frac{1}{2}$ -cup container is \$1.10, and the  $3\frac{1}{2}$ -cup container is \$1.75. Which is the best buy?

50. The sweater Ingrid wants to buy is \$30. It is on sale for 33% off. If the sales tax is 7%, what is the total cost of the sweater? Round to the nearest cent, if necessary.

51. Six friends play golf. Their scores are 87, 95, 92, 88, 91, and 96. What is the mean, median, and mode of the friends' scores?

Mean: \_\_\_\_\_

Median: \_\_\_\_\_

Mode: \_\_\_\_\_

Jorge tips the waiter 20%. If the bill, before tip, comes to \$25.50, what does Jorge pay including tip?

- A. \$0.51
- B. \$5.10
- C. \$26.01
- D. \$30.60

53. It costs \$3.50 per hour to rent a bike, plus a flat fee of \$5.50. If Juanita spends a total of \$40.50, for how many hours did she rent the bike?

F.  $4\frac{1}{2}$  h

G. 7 h

H. 10 h

J. 12 h

54. You are building a triangular pen for your pet pig. The first two sides must be 15 feet and 10 feet in length. Which of the following could be the length of the third side?

F. 3 ft

G. 5 ft

H. 10 ft

J. 35 ft

55. The scale on a map is 1 inch = 31.5 miles. What is the actual distance if the map distance is 3.5 inches?

F. 9 mi

G. 90 mi

H. 110.25 mi

J. not given

2. Lilly sold 43 of her 58 boxes of cookies. About what percent of her boxes were sold?

- A. 0.74%                      C. 26%  
 B. 0.26%                      D. 74%

33. It rained 12 days out of 30 days. Which ratio compares the number of rainy days to the number of dry days?

- F.  $\frac{2}{5}$                               G. 18 : 12  
 H. 12 : 30                        J. 2 : 3

4. A right triangle contains an angle with a measure of  $32^\circ$ . What is the measure of the third angle?

- F.  $58^\circ$                               G.  $74^\circ$   
 H.  $148^\circ$                             J. not given

35. Solve.  
 $\frac{m}{10} = -12$

6. Which number is equivalent to  $\frac{1}{5}$ ?

- F. 5  
 G. 0.5  
 H. 0.2  
 J. 0.1

37. Solve.  
 $63 = 8x - 9$

38. Solve.  
 $1\frac{1}{9}y = 10$

- A.  $y = 11\frac{1}{9}$                       B.  $y = 6$   
 C.  $y = 8\frac{8}{9}$                         D.  $y = 4$

Evaluate each expression for  $a = 5$  and  $b = -6$ .

39.  $a^2 - b + (10 \div a)$

\_\_\_\_\_

40.  $3a(b + a)$

\_\_\_\_\_

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

\_\_\_\_\_

Simplify.

42.  $(3x + 14) + (19x - 35)$

\_\_\_\_\_

43.  $(5c^2 + c) - (3c^2 + 11c)$

\_\_\_\_\_

44.  $6y^3(3 + 4y^2)$

\_\_\_\_\_

Solve.

45.  $-7(2z + 4) = 21$

\_\_\_\_\_

46.  $9x - 5 = 16 + 2x$

\_\_\_\_\_

47.  $-8(7 - 4n) - 2n = 16 + 12n$

\_\_\_\_\_