# Upper Academy
## 6th Grade Math
## Summer 2025 Home Learning

We strongly recommend your child works on the Summer Home Learning assignment. It will help your child to get a general idea of the content to be covered throughout the next school year.

**Directions to students**: Please complete the math problems on the following pages the best you can and show and turn in your work on a separate sheet of paper.

If some questions are not familiar to you, use Khan Academy, IXL videos related to each topic, or "Mathantics" videos.

GRADE
6

# Mathematics Summer Learning (show work on separate paper)

**Select the best answer.**

1. Average yearly heat and electric costs are listed in the table. About how much more is the average cost in Brazil than in the U.S.?

| Country | Average Cost |
|---------|--------------|
| Argentina | $2,137 |
| Brazil | $2,702 |
| India | $2,360 |
| U.S. | $2,376 |

  A  $200         C  $400

  B  $300         D  $600

2. What is the value of $5^4$?

  F  20         H  625

  G  45         I  715

3. What is the value of
$4 \cdot 5 - 2 \cdot 6 + 4$ ?

  A  12         C  36

  B  18         D  72

4. Which expression shows how the Distributive Property can be used to multiply $8 \times 29$?

  F  $8(20) + 8(9)$     H  $29(8)$

  G  $8 + 20 \cdot 8 + 9$     I  $8(20) + 9$

5. Which algebraic expression means "the sum of 3 times a number and 5"?

  A  $3x + 5$         C  $5 + x$

  B  $5x + 3$         D  $2x + 5$

6. Which is a solution to $x - 9 = 16$?

  F  $x = 7$         H  $x = 12$

  G  $x = 10$       I  $x = 25$

7. Mitch works 4 afternoons per week at a local drugstore. He earns $32 per day. How many weeks will Mitch have to work in order to earn $896?

  A  5 weeks         C  9 weeks

  B  7 weeks         D  28 weeks

8. What is the solution to the
equation $\dfrac{x}{3} = 18$?

  F  $x = 5$         H  $x = 9$

  G  $x = 6$         I  $x = 54$

9. Clarissa works at the deli on Saturdays. Her mom came in and ordered 3 different salads. She ordered 5.2 pounds of potato salad, 5.25 pounds of coleslaw, and 5.3 pounds of pasta salad. Which shows the decimals in order from least to greatest?

  A  5.2, 5.25, 5.3

  B  5.3, 5.25, 5.2

  C  5.25, 5.2, 5.3

  D  5.25, 5.3, 5.2

10. What is the value of $7.36 - s$ when $s = 2.6$?

  F  $s = 4.76$       H  $s = 7.1$

  G  $s = 5.76$       I  $s = 7.346$

**GRADE 6**

# Mathematics Summer Learning (show work on separate paper)

11. A used car loan of $2,262.24 is to be paid off in 18 equal monthly payments. How much is each payment?

    A  $100.24          C  $120.24

    B  $118.52          D  $125.68

12. What is the solution for the equation $\dfrac{y}{8.2} = 3.5$?

    F  $y = -4.7$          H  $y = 11.7$

    G  $y = 2.34$          I  $y = 28.7$

13. What is the GCF of 45, 90, and 150?

    A  3          C  6

    B  5          D  15

14. Four friends cut their hair for a charity. Danielle cut off $8\dfrac{1}{2}$ inches. Marcia cut off $8\dfrac{5}{8}$ inches. Judi cut off $8\dfrac{3}{4}$ inches. Luisa cut off $8\dfrac{5}{6}$ inches. Who cut off the most hair?

    F  Danielle          H  Judi

    G  Marcia          I  Luisa

15. What is the value of $\dfrac{7}{8} - x$ for $x = \dfrac{3}{8}$ written in simplest form?

    A  $\dfrac{1}{4}$          C  $\dfrac{4}{8}$

    B  $\dfrac{1}{2}$          D  $\dfrac{10}{8}$

16. Delroy has just started jogging. He jogs for $\dfrac{5}{8}$ mile, walks for a while, and then jogs an additional $\dfrac{7}{16}$ mile. How far does he jog?

    F  $\dfrac{1}{2}$ mile          H  $1\dfrac{1}{16}$ miles

    G  $\dfrac{3}{4}$ mile          I  $1\dfrac{1}{2}$ miles

17. At summer camp the cook bought 150 pounds of potatoes. The campers made campfire pocket stew and used $82\dfrac{7}{8}$ pounds of potatoes. How many pounds were left?

    A  $60\dfrac{5}{8}$ pounds          C  $68\dfrac{1}{8}$ pounds

    B  $67\dfrac{1}{8}$ pounds          D  $72\dfrac{7}{8}$ pounds

18. Roberto's tuition was $4800. He was able to obtain a loan for $\dfrac{2}{3}$ of the tuition. How much was the loan?

    F  $1,600          H  $3,200

    G  $2,400          I  $9,600

19. A t-shirt requires $\dfrac{3}{4}$ yard of material. How many t-shirts can be made from 18 yards of material?

    A  6          C  24

    B  13          D  36

20. What is the median of this data set?

    5   4   2   8   6   1   3   7   12

    F  5          H  6.4

    G  6          I  7

21. The members of a book club are 33, 33, 38, 35, 57, 37, and 40 years old. To the nearest tenth, what is the mean of this data set with and without the outlier?

  A  36, 38.8          C  39, 36

  B  39, 30.9          D  45.5, 30.9

22. What is the range of the following data set?

| Stem | Leaves |
|------|--------|
| 0    |        |
| 1    | 0 2 7 9 |
| 2    | 2 6    |
| 3    | 5 5 9  |

  F  0                H  29

  G  10               I  39

23. A salt dough recipe calls for 4 cups of salt and 12 cups of flour. If the recipe is reduced, how many cups of flour should be used with 1 cup of salt?

  A  1 cup            C  3 cups

  B  2 cups           D  4 cups

24. The distance between two towns on a map measures 4 inches. The actual distance is 180 miles. What is the scale of the map?

  F  1 inch:15 miles

  G  1 inch:25 miles

  H  1 inch:35 miles

  I  1 inch:45 miles

25. Which set of numbers is in order from greatest to least?

  A  $\frac{3}{8}$; 30%; 0.4

  B  15%; $\frac{1}{6}$; 0.14

  C  60%; 0.58; $\frac{4}{7}$

  D  0.45; $\frac{3}{5}$; 40%

26. Regina received a score of 39 out of 52 on a quiz. What percent did she earn?

  F  39%              H  82%

  G  75%              I  133%

27. A watch cost $75.99. If the sales tax rate is 6.25%, what is the amount of sales tax?

  A  $0.48            C  $4.75

  B  $2.19            D  $474.94

28. Fallon wants to sew a new trim around the edge of a blanket. The blanket is 72 inches wide and 76 inches long. How many inches of edging will Fallon need?

  F  148 inches       H  304 inches

  G  296 inches       I  5,472 inches

29. A circle has a diameter of 16 inches. What is the circumference of the circle rounded to the nearest hundredth? Use 3.14 for $\pi$.

  A  50.24 inches

  B  100.48 inches

  C  200.96 inches

  D  803.84 inches

**GRADE 6** **Mathematics Summer Learning** (show work on separate paper)

30. The Truman's rectangular vegetable garden has a length of 12 feet and a width of 4 feet. What is the area of their vegetable garden?

   F  16 square feet

   G  32 square feet

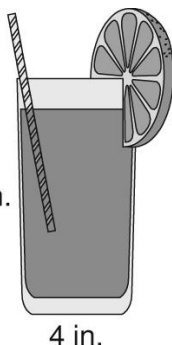   H  36 square feet

   I  48 square feet

31. A circular flowerbed has a diameter of 27 feet. What is the area of the flowerbed? Use 3.14 for $\pi$ and round to the nearest hundredth.

   A  84.78 square feet

   B  452.16 square feet

   C  572.27 square feet

   D  2,289.06 square feet

32. What is the volume of the glass? Use 3.14 for $\pi$.

   F  32 cubic inches

   G  50.24 cubic inches   8 in.

   H  100.48 cubic inches

   I  401.92 cubic inches

   4 in.

33. Which is an equation for the function that gives the values in the table?

   | x | 2 | 3 | 4 |
   |---|---|---|---|
   | y | 10 | 13 | 16 |

   A  $y = 2x - 1$

   B  $y = 3x + 4$

   C  $y = 6x - 2$

   D  $y = 5x + 3$

34. Which ordered pair is a solution of the equation $y = 3x + 1$?

   F  (1, 2)          H  (4, 13)

   G  (3, 9)          I  (5, 15)

35. What is the solution to the equation $3x - 6 = 9$?

   A  $x = 1$          C  $x = 9$

   B  $x = 5$          D  $x = 45$

36. Which value is part of the solution to the inequality $6t \geq 36$?

   F  $t = 0$          H  $t = 4$

   G  $t = 2$          I  $t = 6$

37. What is $|-13|$?

   A  $-13$          C  1

   B  0              D  13

38. Which set of integers is written in order from greatest to least?

   F  $-3, -2, 2, 4$

   G  $-4, -8, -12, -14$

   H  $-2, -4, -1, -7$

   I  $4, -3, -2, -8$

39. What is the value of $-n - (-9)$ for $n = 9$?

   A  $-18$          C  9

   B  0              D  18

40. What is the solution of the equation $z \div (-4) = 16$?

   F  $z = -64$          H  $z = 4$

   G  $z = -4$          I  $z = 6$