



## Math 6 Placement Test (Advanced Learners)

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. A recipe calls for 3 cups of flour for 12 cookies. How many cups are needed for 36 cookies?
2. The ratio of boys to girls in a class is 5:7. If there are 35 girls, how many boys are there?
3. A store has a 25% off sale. If a shirt costs \$48, how much is the sale price?
4. Plot  $-3$  and  $4$  on a number line. Which is greater?
5. Evaluate:  $-12 + (-8) =$  \_\_\_\_\_
6. Evaluate:  $-45 \div (-9) =$  \_\_\_\_\_
7. The temperature was  $-5^{\circ}\text{F}$  in the morning and rose by  $12^{\circ}\text{F}$ . What is the new temperature?
8. Write an expression for: "5 more than twice a number  $n$ ."
9. Solve:  $3x + 7 = 19$
10. Solve:  $4y - 12 = 20$
11. If  $5p = 60$ , what is  $p$ ?
12. Inequality: Solve for  $x \rightarrow 2x + 3 < 15$
13. Add:  $\frac{5}{6} + \frac{7}{12} =$  \_\_\_\_\_
14. Subtract:  $4.2 - 3.85 =$  \_\_\_\_\_

15. Multiply:  $-\frac{3}{4} \times 8 =$  \_\_\_\_\_

16. Divide:  $-12 \div \frac{3}{4} =$  \_\_\_\_\_

17. Find the area of a triangle with base 12 cm and height 9 cm.

18. Find the volume of a rectangular prism with length 6 cm, width 5 cm, height 4 cm.

19. A square pyramid has base side 10 cm and height 12 cm. Find its volume.

20. Find the surface area of a cube with side 7 cm.

21. The numbers are: 12, 15, 18, 12, 21. Find the mean, median, and mode.

22. A histogram shows that 5 students read 1–10 books, 8 students read 11–20 books, and 7 students read 21–30 books. How many students were surveyed?

23. A box plot shows the minimum = 10, Q1 = 20, median = 30, Q3 = 40, maximum = 50. What is the interquartile range (IQR)?

24. A bag has 3 red, 2 green, and 5 blue marbles. What is the probability of choosing:

a) green?

b) not red?

25. On a coordinate plane, plot the points (2, 3), (2, -1), (-4, -1), (-4, 3). What shape is formed? What is its perimeter?

## ■ Placement Guide for Parents

**22–25 points ■** – Strong mastery – Ready for Math 7 (Pre-Algebra).

**15–21 points ■** – Solid understanding – Great fit for Math 6.

**0–14 points ■** – Needs support – Consider Math 5 or a 1:1 support session.

■ *Note:* Placement is about confidence and mastery, not being “ahead” or “behind.”

## Answer Key

1. 9 cups
2. 25 boys
3. \$36
4. 4 is greater
5.  $-20$
6. 5
7.  $7^{\circ}\text{F}$
8.  $2n + 5$
9.  $x = 4$
10.  $y = 8$
11.  $p = 12$
12.  $x < 6$
13.  $\frac{17}{12}$  or  $1 \frac{5}{12}$
14. 0.35
15.  $-6$
16.  $-16$
17.  $54 \text{ cm}^2$
18.  $120 \text{ cm}^3$
19.  $400 \text{ cm}^3$
20.  $294 \text{ cm}^2$
21. Mean = 15.6, Median = 15, Mode = 12
22. 20 students
23. 20
- 24a.  $\frac{1}{5}$ , 24b.  $\frac{7}{10}$
25. Rectangle, Perimeter = 20 units