

# BIG BRAIN MATH ACADEMY

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## 1. Algebra Readiness Summer Boot Camp

### Big Brain Math Academy Placement Test

Parent Instructions:

- Complete without a calculator.
- Parents should administer and score the assessment.
- Questions 1–25 are worth 1 point each.
- Question 26 is worth 2 points.
- Question 27 is worth 3 points.
- Questions 28–29 are worth 1 point each.
- Total Possible Score: 30 points.

Student Name: \_\_\_\_\_

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

## 2. Assessment Questions

1. Evaluate:  $-8 + 15$

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2. Evaluate:  $12 - 19$

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3. Evaluate:  $-6 \times 7$

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4. Evaluate:  $56 \div (-8)$

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5. Add:  $\frac{3}{8} + \frac{1}{8}$

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6. Subtract:  $\frac{5}{6} - \frac{1}{3}$

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7. Multiply:  $0.4 \times 5$

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8. Divide:  $3.6 \div 0.6$

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9. Evaluate:  $4 + 3(2^2)$

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10. Evaluate:  $18 - (6 \div 2) + 5$

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11. Evaluate  $3x + 2$  when  $x = 4$

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12. Simplify:  $5a + 2a$

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13. Simplify:  $4(x + 3)$

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14. Solve:  $x + 9 = 17$

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15. Solve:  $3x = 21$

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16. Solve:  $2x + 5 = 19$

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17. Solve:  $5x - 7 = 18$

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18. Simplify the ratio 8:12

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19. Solve:  $x/5 = 12/15$

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20. Plot the point (3, -2)

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21. In which quadrant is (-4, 5)?

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22. A shirt costs \$24 and is 25% off. What is the discount?

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23. Maria earns \$15 per hour. How much will she earn in 8 hours?

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24. A rectangle has a length of 12 and width of 5. Find the area.

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25. A number increased by 7 equals 19. Write and solve an equation.

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26. (2 Points) Solve the system:  $x + y = 10$  and  $x - y = 2$

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27. (3 Points) Adult tickets cost \$10 and child tickets cost \$5. A total of 8 tickets were sold for \$55. How many adult tickets and child tickets were sold?

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28. Solve:  $3x + 5 = 26$

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29. Solve:  $2(x - 4) = 10$

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### 3. Answer Key

1) 7

2) -7

3) -42

4) -7

5)  $\frac{1}{2}$

6)  $\frac{1}{2}$

7) 2

8) 6

9) 16

10) 20

11) 14

12) 7a

13)  $4x + 12$

14) 8

15) 7

16) 7

17) 5

18) 2:3

19) 4

20) Parent Check

21) Quadrant II

22) \$6

23) \$120

24) 60 square units

25)  $x = 12$

26)  $x = 6, y = 4$

27) 3 adult tickets and 5 child tickets

28)  $x = 7$

29)  $x = 9$

#### **4. Placement Guide**

26–30: Ready for Algebra 1

18–25: Algebra Readiness Recommended

0–17: Strongly Recommend Algebra Readiness Before Algebra 1