

NYS Grade 6 to Grade 7 Math Summer Work Packet

Part A: Whole Numbers & Decimals

1. $4,582 + 7,349$
2. $8,000 - 3,765$
3. 45×23
4. $672 \div 8$
5. $15.7 + 8.94$

Part B: Fractions

6. $\frac{3}{4} + \frac{1}{8}$
7. $\frac{5}{6} - \frac{1}{3}$
8. $\frac{2}{5} \times 10$
9. $\frac{3}{4} + \frac{1}{2}$
10. Compare: $\frac{2}{3}$ ___ $\frac{3}{4}$

Part C: Ratios & Rates

11. Simplify 12:18
12. A car travels 180 miles in 3 hours. Find the unit rate.
13. If 4 notebooks cost \$12, how much does one notebook cost?

Part D: Expressions

14. Evaluate $3x + 5$ when $x = 4$.
15. Evaluate $2a - 7$ when $a = 9$.
16. Write an expression: 5 more than n .

Part E: Equations

17. $x + 9 = 24$
18. $4x = 36$
19. $x - 12 = 15$
20. $x/5 = 8$

Part F: Geometry

21. Area of rectangle: length 9 cm, width 7 cm.
22. Perimeter of rectangle: length 12 cm, width 5 cm.
23. Area of triangle: base 10 cm, height 6 cm.

Part G: Coordinate Plane

24. Plot A(2,3), B(-2,4), C(-3,-2), D(4,-1). Identify quadrants.

Part H: Statistics & Probability

25. Find the mean of 8, 10, 12, 14, 16.
26. A bag contains 5 red and 3 blue marbles. Find P(red).
27. Find the range of 4, 7, 11, 15, 18.

Challenge Problems

28. A shirt costs \$40 and is discounted 20%.

29. The ratio of boys to girls is 2:3. If there are 18 girls, how many boys?

30. Solve: $2(x + 4) = 20$

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Student Name: _____

Entering Grade: 7

Directions:

- Show all work.
- Simplify answers when possible.
- Complete all sections before the first week of school.
- Circle your final answer.

Part 1: Whole Number Operations

1. $3,482 + 5,967 = \underline{\hspace{2cm}}$
2. $9,000 - 4,385 = \underline{\hspace{2cm}}$
3. $248 \times 6 = \underline{\hspace{2cm}}$
4. $864 \div 9 = \underline{\hspace{2cm}}$
5. $3,215 + 897 = \underline{\hspace{2cm}}$
6. $5,000 - 2,798 = \underline{\hspace{2cm}}$
7. $425 \times 8 = \underline{\hspace{2cm}}$
8. $1,296 \div 6 = \underline{\hspace{2cm}}$
9. $7,205 + 1,498 = \underline{\hspace{2cm}}$
10. $4,800 - 1,965 = \underline{\hspace{2cm}}$

Part 2: Fractions

11. $\frac{1}{4} + \frac{2}{4}$
12. $\frac{1}{8} - \frac{3}{8}$
13. $\frac{2}{3} + \frac{1}{6}$
14. $\frac{3}{5} - \frac{1}{3}$
15. $\frac{3}{5} \times \frac{2}{3}$
16. $\frac{4}{7} \times \frac{14}{3}$
17. $\frac{3}{4} \div \frac{1}{2}$
18. $\frac{5}{6} \div \frac{5}{12}$

Part 3: Decimals

19. $4.56 + 2.18 = \underline{\hspace{2cm}}$
20. $9.3 - 4.75 = \underline{\hspace{2cm}}$
21. $3.2 \times 0.5 = \underline{\hspace{2cm}}$
22. $7.2 \div 0.6 = \underline{\hspace{2cm}}$
23. $15.08 + 6.92 = \underline{\hspace{2cm}}$
24. $12.5 - 3.78 = \underline{\hspace{2cm}}$

Part 4: Percent

25. Write 0.45 as a percent.
26. Write 75% as a decimal.
27. Find 10% of 250.
28. Find 25% of 80.
29. Find 50% of 140.
30. What percent of 60 is 15?

Part 5: Ratios and Rates

31. Write the ratio 8 boys to 12 girls in simplest form.
32. A car travels 180 miles in 3 hours. Find the unit rate.
33. 5 notebooks cost \$10. What is the unit price?
34. A runner completes 12 miles in 2 hours. Find the unit rate.
35. Simplify the ratio 15:25.

Part 6: Expressions and Order of Operations

36. $8 + 4 \times 3$
37. $24 \div 6 + 5$
38. $7 + (18 - 6)$
39. $4^2 + 6$
40. $3(5 + 2)$
41. $20 - (3 \times 4)$
42. $5^2 - 10$

Part 7: Geometry

- 43. Find the perimeter of a rectangle with length 12 cm and width 5 cm.
- 44. Find the area of the rectangle above.
- 45. Find the area of a triangle with base 10 cm and height 8 cm.
- 46. Find the volume of a rectangular prism:

Length = 6 cm

Width = 4 cm

Height = 5 cm

- 47. Find the area of a square with side length 9 cm.
- 48. Find the circumference of a circle with radius 7 cm. Use $\pi = 3.14$.

Part 8: Coordinate Plane

Plot and identify the quadrant.

- 49. (3, 4)
- 50. (-2, 5)
- 51. (-4, -3)
- 52. (5, -2)
- 53. Which point is located on the x-axis?

A. (0,5)

B. (4,0)

C. (2,3)

D. (-1,4)

Part 9: Intro to Integers (Grade 7 Readiness)

- 54. $-4 + 9 = \underline{\hspace{2cm}}$
- 55. $8 + (-11) = \underline{\hspace{2cm}}$
- 56. $-7 + (-6) = \underline{\hspace{2cm}}$
- 57. $15 - 20 = \underline{\hspace{2cm}}$

58. $-3 \times 4 = \underline{\hspace{2cm}}$

59. $-24 \div 6 = \underline{\hspace{2cm}}$

60. $(-5)(-8) = \underline{\hspace{2cm}}$

Part 10: Intro to Algebra (Grade 7 Readiness)

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

62. Evaluate $5n - 7$ when $n = 3$.

63. Solve: $x + 6 = 15$

64. Solve: $y - 9 = 12$

65. Solve: $4a = 28$

66. Solve: $m \div 5 = 8$

67. Write an expression for:

"7 more than a number x "

68. Write an expression for:

"3 times a number n "

69. Evaluate $2a + 5$ when $a = 6$

70. Evaluate $10 - b$ when $b = 4$

Answer Key

1. 9,449

2. 4,615

3. 1,488

4. 96

5. 4,112

6. 2,202

7. 3,400

8. 216

9. 8,703

10. 2,835

11. $3/4$

12. $1/2$

13. $5/6$

14. $1/2$

15. $2/5$