

Summer Math Packet for Incoming 5th Graders

Grade 4 Standards Review

This packet reviews essential 4th-grade standards to prepare you for 5th grade. Work through all 100 problems and check your answers at the end.

Section 1: Operations and Algebraic Thinking – Multiplication as Comparison & Multi-Step Problems

1. $18 \times 4 =$ _____
2. $12 \times 7 =$ _____
3. If 72 is 8 times as many as a number, what is that number? _____
4. $15 \times 6 =$ _____
5. Write a multiplication equation for: 56 is 7 times as many as _____ (and solve)
6. $23 \times 5 =$ _____
7. Complete: 96 is _____ times as many as 12. (Write a multiplication equation too.)
8. $25 \times 4 =$ _____
9. Compare using $<$, $=$, or $>$: 9×8 _____ 12×6
10. $14 \times 6 =$ _____
11. A restaurant receives 8 boxes of supplies. Each box contains 35 items. How many items did they receive in total? _____
12. $16 \times 7 =$ _____
13. If one number is 9 times as large as another, and the larger number is 108, what is the smaller number? _____
14. $13 \times 8 =$ _____
15. Compare using $<$, $=$, or $>$: 11×9 _____ 10×10
16. $19 \times 5 =$ _____

17. **Word Problem:** A bakery makes 4 batches of cookies. Each batch has 24 cookies. They sell 35 cookies in the morning and 28 cookies in the afternoon. How many cookies are left?

Section 2: Factors, Multiples, Prime and Composite Numbers

18. List all the factors of 48.
19. Is 29 prime or composite? Explain your reasoning.
20. Find all factor pairs for 56.
21. Is 33 prime or composite? Why?
22. List all the factors of 60.
23. Which of these is prime: 17, 21, or 27? Explain.
24. Find all factor pairs for 72.
25. A number has exactly 8 factors. The smallest factor is 1 and the largest is 40. What is the number? _____
26. List all the factors of 64.
27. List the first 6 multiples of 7.
28. Identify all prime numbers between 40 and 50.
29. Find all factor pairs for 84.
30. Is 49 prime or composite? Explain.
31. List the first 5 multiples of 9.
32. What are all the factors of 100?
33. Which is the only even prime number? _____

34. **Word Problem:** Sam is arranging 36 chairs in equal rows. What are all the different ways he can arrange them? (List each as rows $\times$ columns.)

Section 3: Place Value, Rounding, and Multi-Digit Addition & Subtraction

35. In 45,627, what does the digit 5 represent in terms of place value? _____
36. Round 7,859 to the nearest thousand. _____
37. $6,345 + 4,678 =$ _____
38. Write 8,042 in expanded form: _____
39. Round 9,254 to the nearest hundred. _____
40. $8,000 - 2,567 =$ _____
41. Compare using $<$, $=$, or $>$: 52,841 _____ 52,814
42. Round 6,427 to the nearest ten. _____
43. $5,623 + 3,789 =$ _____
44. If a number rounds to 7,000 when rounded to the nearest thousand, what could it be?
(Give two examples.) _____
45. $9,500 - 4,238 =$ _____
46. In 73,456, the digit 3 represents _____ (how many of what place value?).
47. Round 8,963 to the nearest ten. _____
48. $7,234 + 2,899 =$ _____
49. Order these from least to greatest: 6,042; 6,204; 6,024 _____
50. $10,000 - 3,567 =$ _____

51. **Word Problem:** A store has 2,450 apples on Monday. On Tuesday, they receive 1,875 more apples. On Wednesday, they sell 2,100 apples. How many apples do they have left?

Section 4: Multi-Digit Multiplication and Division

52. $47 \times 6 =$ _____

53. $156 \div 6 =$ _____

54. $32 \times 8 =$ _____

55. $87 \div 9 =$ _____ remainder _____

56. $56 \times 7 =$ _____

57. $143 \div 11 =$ _____

58. $29 \times 9 =$ _____

59. $200 \div 8 =$ _____ remainder _____

60. $38 \times 4 =$ _____

61. $165 \div 5 =$ _____

62. $64 \times 5 =$ _____

63. $178 \div 7 =$ _____ remainder _____

64. $43 \times 6 =$ _____

65. $192 \div 8 =$ _____

66. $51 \times 7 =$ _____

67. $215 \div 9 =$ _____ remainder _____

68. **Word Problem:** A teacher has 144 pencils to distribute equally among 6 classrooms.
How many pencils does each classroom get?

Section 5: Fractions – Equivalence, Comparison, Operations, and Decimals

69. $\frac{3}{4}$ _____ $\frac{9}{12}$ (use <, =, or >)

70. $\frac{5}{8}$ _____ $\frac{7}{12}$ (use <, =, or >)

71. $\frac{3}{6} + \frac{4}{6} =$ _____

72. $\frac{7}{8} - \frac{3}{8} =$ _____

73. $4 \times \frac{2}{5} =$ _____

74. $\frac{5}{9} + \frac{2}{9} =$ _____

75. Write $\frac{25}{100}$ as a decimal: _____

76. Find an equivalent fraction for $\frac{3}{5}$: _____

77. $\frac{8}{10} - \frac{3}{10} =$ _____

78. $5 \times \frac{3}{7} =$ _____

79. Write $\frac{6}{10}$ as a decimal: _____ and as a simplified fraction: _____

80. $\frac{7}{12} + \frac{5}{12} =$ _____

81. Which is greater: 0.45 or 0.54? _____

82. $\frac{9}{10} - \frac{4}{10} =$ _____

83. $3 \times \frac{5}{8} =$ _____

84. Order from least to greatest: $\frac{1}{4}, \frac{1}{2}, \frac{3}{8}$ _____

35. **Word Problem:** Maria ate $\frac{2}{8}$ of a pizza and her brother ate $\frac{3}{8}$ of the same pizza. How much of the pizza did they eat together?

Section 6: Measurement, Area, Perimeter, Data, Angles, and Geometry

36. Convert 5.5 meters to centimeters: ____

37. A rectangle has a length of 15 cm and a width of 9 cm. Find the area: ____

38. A rectangle has a length of 18 inches and a width of 12 inches. Find the perimeter:

39. Convert 2.5 kilograms to grams: ____

90. A square has a side length of 11 cm. Find both the area and perimeter: Area = _____,
Perimeter = _____

91. A container holds 3.5 liters. How many milliliters is that? ____

92. A rectangle has an area of 96 square feet and a length of 12 feet. What is the width?

93. Convert 8 feet to inches: ____

94. Two angles are adjacent and form a straight line. One angle measures 38° . What is the measure of the other angle? ____

95. If two angles form a right angle (90°), and one angle measures 27° , what is the other angle? ____

96. A right triangle is also isosceles. What can you tell about its angles? _____

97. Which of these shapes has more than one line of symmetry: rectangle, square, circle?

98. A rectangle has a perimeter of 48 cm. If the length is 14 cm, what is the width? ____

99. Convert 6.5 pounds to ounces: ____

100. Measure an angle of 135° and identify what type of angle it is. _____

01. **Word Problem:** A farmer has a rectangular garden that is 12 meters long and 8 meters wide. He wants to put a fence around it and plant grass inside. How much fencing does he need, and what is the total area of grass he will plant?

Answer Key

Section 1: Operations and Algebraic Thinking

1. $18 \times 4 = 72$
2. $12 \times 7 = 84$
3. $72 \div 8 = 9$
4. $15 \times 6 = 90$
5. $56 = 7 \times 8$ (or 56 is 7 times as many as 8)
6. $23 \times 5 = 115$
7. 96 is 8 times as many as 12; $96 = 8 \times 12$
8. $25 \times 4 = 100$
9. $9 \times 8 = 72$ and $12 \times 6 = 72$, so $72 = 72$
10. $14 \times 6 = 84$
11. $8 \times 35 = 280$ items
12. $16 \times 7 = 112$
13. $108 \div 9 = 12$
14. $13 \times 8 = 104$
15. $11 \times 9 = 99$ and $10 \times 10 = 100$, so $99 < 100$
16. $19 \times 5 = 95$
17. $4 \times 24 = 96$ cookies made; $35 + 28 = 63$ cookies sold; $96 - 63 = 33$ cookies left

Section 2: Factors, Multiples, Prime and Composite

18. 1, 2, 3, 4, 6, 8, 12, 16, 24, 48
19. Prime (only factors are 1 and 29; cannot be divided evenly by other numbers)
20. $1 \times 56, 2 \times 28, 4 \times 14, 7 \times 8$

21. Composite (it can be divided by 3: $33 = 3 \times 11$)
22. 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60
23. 17 is prime (only divisible by 1 and 17); 21 is composite (3×7); 27 is composite (3×9)
24. $1 \times 72, 2 \times 36, 3 \times 24, 4 \times 18, 6 \times 12, 8 \times 9$
25. 40 (The factors are: 1, 2, 4, 5, 8, 10, 20, 40 — that's 8 factors)
26. 1, 2, 4, 8, 16, 32, 64
27. 7, 14, 21, 28, 35, 42
28. 41, 43, 47
29. $1 \times 84, 2 \times 42, 3 \times 28, 4 \times 21, 6 \times 14, 7 \times 12$
30. Composite ($49 = 7 \times 7$)
31. 9, 18, 27, 36, 45
32. 1, 2, 4, 5, 10, 20, 25, 50, 100
33. 2 (it's the only even number that is prime)
34. Factors of 36: $1 \times 36, 2 \times 18, 3 \times 12, 4 \times 9, 6 \times 6$

Section 3: Place Value, Rounding, Addition & Subtraction

35. 5 thousands (or 5,000)
36. 8,000
37. $6,345 + 4,678 = 11,023$
38. $8,000 + 0 + 40 + 2$ or $8,000 + 42$
39. 9,300
40. $8,000 - 2,567 = 5,433$
41. $52,841 > 52,814$
42. 6,430

43. $5,623 + 3,789 = 9,412$

44. Any number from 6,500 to 7,499 works (Examples: 6,750 and 7,250)

45. $9,500 - 4,238 = 5,262$

46. 3 thousands (or 3,000)

47. 8,960

48. $7,234 + 2,899 = 10,133$

49. 6,024; 6,042; 6,204

50. $10,000 - 3,567 = 6,433$

51. $2,450 + 1,875 = 4,325$ apples; $4,325 - 2,100 = 2,225$ apples left

Section 4: Multi-Digit Multiplication and Division

52. $47 \times 6 = 282$

53. $156 \div 6 = 26$

54. $32 \times 8 = 256$

55. $87 \div 9 = 9$ remainder 6

56. $56 \times 7 = 392$

57. $143 \div 11 = 13$

58. $29 \times 9 = 261$

59. $200 \div 8 = 25$ remainder 0

60. $38 \times 4 = 152$

61. $165 \div 5 = 33$

62. $64 \times 5 = 320$

63. $178 \div 7 = 25$ remainder 3

64. $43 \times 6 = 258$

65. $192 \div 8 = 24$

66. $51 \times 7 = 357$

67. $215 \div 9 = 23$ remainder 8

68. $144 \div 6 = 24$ pencils per classroom

Section 5: Fractions, Comparison, Operations, and Decimals

69. $\frac{3}{4} = \frac{9}{12}$

70. $\frac{5}{8} < \frac{7}{12}$ ($\frac{5}{8} = \frac{15}{24}$ and $\frac{7}{12} = \frac{14}{24}$, wait – $\frac{15}{24} > \frac{14}{24}$, so $\frac{5}{8} > \frac{7}{12}$) – Correct answer: >
Actually: $\frac{5}{8} = 0.625$ and $\frac{7}{12} \approx 0.583$, so $\frac{5}{8} > \frac{7}{12}$

71. $\frac{7}{6}$ or $1\frac{1}{6}$

72. $\frac{4}{8}$ or $\frac{1}{2}$

73. $\frac{8}{5}$ or $1\frac{3}{5}$

74. $\frac{7}{9}$

75. 0.25

76. $\frac{6}{10}$ or $\frac{3}{5}$ (answers vary)

77. $\frac{5}{10}$ or $\frac{1}{2}$

78. $\frac{15}{7}$ or $2\frac{1}{7}$

79. 0.6 and $\frac{3}{5}$

80. $\frac{12}{12}$ or 1

81. 0.54 is greater

82. $\frac{5}{10}$ or $\frac{1}{2}$

83. $\frac{15}{8}$ or $1\frac{7}{8}$

84. $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$

85. $\frac{2}{8} + \frac{3}{8} = \frac{5}{8}$ of the pizza

Section 6: Measurement, Area, Perimeter, Data, Angles, and Geometry

86. 550 cm

37. $15 \times 9 = 135 \text{ cm}^2$

38. $2(18 + 12) = 60$ inches

39. 2,500 grams

90. Area = $11 \times 11 = 121 \text{ cm}^2$; Perimeter = $4 \times 11 = 44 \text{ cm}$

91. 3,500 milliliters

92. Width = $96 \div 12 = 8$ feet

93. $8 \times 12 = 96$ inches

94. $180^\circ - 38^\circ = 142^\circ$

95. $90^\circ - 27^\circ = 63^\circ$

96. Both acute angles must be 45° each (since they sum to 90°)

97. Square and circle (both have multiple lines of symmetry)

98. Width = $(48 - 2 \times 14) \div 2 = 10 \text{ cm}$

99. $6.5 \times 16 = 104$ ounces

100. 135° is an obtuse angle

101. Perimeter: $2(12 + 8) = 40$ meters of fencing; Area: $12 \times 8 = 96$ square meters of grass