

1. $157 + 849 - 2025 =$ _____
2. $(7.2)(14 + 11) =$ _____
3. $3\frac{5}{6} - 1\frac{7}{8} =$ _____
4. $1568 \div 9 =$ _____ (mixed number)
5. $28^2 =$ _____
6. The GCD of 28, 36, and 48 is _____
7. $\frac{1}{16} =$ _____ %
8. $1\frac{9}{10} \times 21 =$ _____
9. $2197 \div 13 =$ _____
- * 10. $(12568 - 2025) \div 7.5 =$ _____
11. MDCLXIX – CCXXV =
_____ (Arabic numerals)
12. 6% tax on \$252.00 is \$ _____
13. $18 \times \frac{18}{19} =$ _____ (mixed number)
14. $3 \div (7 - 12) \times 3 - (-2)^2 =$ _____
15. $33 \times 37 =$ _____
16. $35 \times 37 =$ _____
17. $5\frac{5}{6} \times 37 =$ _____ (mixed number)
18. $\frac{3}{4}$ of 124 is 50% of _____
19. The number of positive integral divisors of 45 is

- * 20. $74 \times 76^2 =$ _____
21. Find the digit B, $B > 0$, where $B78 \times B6 = 13608$.

22. 315 base 6 is written as _____ base 10
23. $[14 - 5 \times 7 + k] \div 5$ has a remainder of 3.
Find k , $10 \leq k \leq 15$. _____
24. If $\frac{11}{45} = 0.abbb\dots$, then $a \times b =$ _____
25. Write two and a half million, thirty-four thousand, five hundred six in digits.

26. $98 \times 104 =$ _____
27. How many integers between 15 and 66 are multiples of 5? _____
28. Find x if $\frac{1}{8} + \frac{1}{x} = \frac{1}{5}$. _____
29. $[\{s, q, u, a, r, e\} \cup \{c, u, b, e\}] \cap \{f, o, u, r, t, h\}$ has how many distinct elements? _____
- * 30. $\sqrt{512025} =$ _____
31. If $f(x) = 9x^2 - 12x + 4$, then $f(5) =$ _____
32. $1 \div 3\frac{1}{3} =$ _____
33. Given: 2, 5, 10, 17, 28, 41, m , n , 112, ...
Find $m + n$. _____
34. $6\frac{5}{7} \times 7\frac{5}{6} =$ _____
35. 1101011 base 2 = _____ base 8
36. The ratio of the sides of a rectangle with perimeter 28 inches is 4 : 3. Find its area.
_____ in²
37. Let $\frac{x+9}{x-5} + \frac{x-5}{x+9} = 2\frac{B}{C}$. Find B . _____
38. $4492 \times 6 + 48 =$ _____
39. The cost of 28 pencils at 23¢ each is \$ _____
- * 40. $\sqrt[3]{5120250} =$ _____
41. 30 less 28% of 25 is _____
42. $(707)^2 =$ _____

43. $23^2 + 73^2 =$ _____
44. $47_8 \times 11_8 + 33_8 =$ _____₈
45. If $\sqrt{2\sqrt{3\sqrt{x+1}}} = 6$, then $x =$ _____
46. The sum of the first 6 triangular numbers is _____
47. $(11^3 - 7^3) \div 4 =$ _____
48. The coefficient of the x^2y^2 -term of $(x - 5)^4$ is _____
49. The sum of the interior angles of a regular nonagon is _____^o
- * 50. $2002025 \div 5205 =$ _____
51. If $\frac{3-4i}{1-2i} = a + bi$, then $a + b =$ _____
52. $(7^5 + 4^5 - 8) \div 11$ has a remainder of _____
53. If $(\sqrt[4]{a^5})(\sqrt[7]{a^3}) = \sqrt[n]{a^k}$, where n and k are relatively prime, then $n + k =$ _____
54. The product of the roots of $5x^3 + 13x^2 - 26x + 8 = 0$ is _____
55. Let $3x - 4y = 6$ and $3x + 5y = 3$. Find x . _____
56. $30 - 6 + 1\frac{1}{5} - \frac{6}{25} + \dots =$ _____
57. Let $5\frac{5}{m} \times n\frac{1}{5} = 24$, where m, n are natural numbers. Find $m - n$. _____
58. Two dice are tossed. What are the odds that their sum is a multiple of 6? _____
59. $12\frac{3}{4} \times 5\frac{6}{7} =$ _____ (mixed number)
- * 60. $27^5 \div 3^4 \times (\frac{1}{9})^3 =$ _____
61. $\cos(\frac{\pi}{4}) \times \cos(\frac{3\pi}{4}) =$ _____
62. The remainder when $3027_8 \div 4_8$ is _____
63. $f(x) = x^2 - x + 5$ and $g(x) = \sqrt{x - 11}$. Find $f(g(36))$. _____
64. 132 feet = _____ rods
65. $1.5 + 2.5 + 4 + 6.5 + 10.5 + 17 + 27.5 + 44.5 + 72 + 116.5 + 188.5 =$ _____
66. The 4th pentagonal number is _____
67. $\begin{bmatrix} 3 & 4 \\ -1 & -2 \end{bmatrix} \times \begin{bmatrix} 1 & 7 \\ -2 & 3 \end{bmatrix} = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$. Find $c + d =$ _____
68. How many 3-element subsets does a 7-element set have? _____
69. $f(x) = \frac{2x-7}{x+3}$ and $f^{-1}(-3) =$ _____
- * 70. $15.5 \times 31 \times 62 \times 93 \div 124 =$ _____
71. 0.32 base 7 = _____ base 10 (fraction)
72. The domain of $g(x) = \sqrt{3x+1} - \sqrt{4-5x}$ is $[a, b]$ and $b - a =$ _____
73. The smallest possible value of $y = x^2 - 6x - 7$ is _____
74. Find x , $5 \leq x \leq 15$, if $5x - 3 \equiv 8 \pmod{13}$. _____
75. $x^2 - 4x + y^2 + 12y = 9$ has an area of $k\pi$ sq. units and $k =$ _____
76. $F(x) = 5x^3 + 6x^2 - 7$ and $F''(-0.2) =$ _____
77. The x -intercept of the line tangent to $y = x^2 - 5x$ at $(3, -6)$ is $x =$ _____
78. Given: 4, 1, 9, 16, 49, k , 324, 841, ... Find k . _____
79. $\int_{-2}^5 (x - 1) dx =$ _____
- * 80. 87.5% of 6875 is _____