1. The LCM of 84 and 63 is _____________.
2. $11 \times 37 = $ _____________
3. $343 \div 9 = $ _____________ (mixed number)
4. $309 - 903 = $ _____________
5. $7 \div 15 = $ _____________
6. $11 \times 76 = $ _____________
7. $(2 \times \frac{1}{3}) \div \frac{3}{2} = $ _____________
8. $\frac{1}{7} = $ _____________ % (mixed number)
9. $812 - 218 = $ _____________
10. $776 - 55 + 44 = $ _____________
11. $28 \div 3\frac{1}{2} = $ _____________
12. $12\frac{1}{2}$% of one gallon = _____________ ounces
13. The average of 18, 29, and 16 is _____________
14. If 12 ounces of nuts costs $1.25 then 3 pounds of nuts will cost $__________.
15. $11^4 \div 11 = $ _____________
16. 1 quart + 1 pint + 1 cup = _____ fluid ounces
17. $17 \times \frac{17}{21} = $ _____________ (mixed number)
18. $15 \times 38 = $ _____________
19. 42 is what percent of 60? _____________ %
20. $(48 \div 3 \div 2 \times 5)^3 = $ _____________
21. $\frac{8 \frac{1}{8}}{8} \times 16\frac{1}{8} = $ _____________ (mixed number)
22. 4 pints is what percent of a gallon? _______ %
23. $3^4 + 2^5 - 4^3 = k^2$. $k = $ _____________
24. $3663 \div 111 = $ _____________
25. $\frac{7}{12} \times 2\frac{2}{5} = $ _____________
26. $21^2 + 63^2 = $ _____________
27. $312_7 = $ _____________ 10
28. The GCD of 26, 52, and 70 is _____________
29. 3.5 pints = _____________ quarts
30. $14 \times 11 \times 33 = $ _____________
31. $0.212121\ldots = $ _____________ (fraction)
32. Set $A = \{m, e, n, t, a, l\}$ and set $B = \{m, a, t, h\}$. $A \cap B$ contains how many elements? _________
33. If $A = \{v, o, l, u, m, e\}$ and $B = \{r, a, d, i, u, s\}$, then $A \cap B$ has _________ unique elements
34. $45_9 = $ _____________ s
35. If $x + (x + 3) + (x + 6) + (x + 9) + (x + 12) = 105$, then $(x + 6) = $ _____________
36. $f(x) = 9x^2 + 6x + 1$. Find $f(7)$. _____________
37. A ticket costs $5.75. 12 tickets costs $__________.
38. If $2x^3 + 3x^2 - 11x - 6 = 0$ and $P, Q, \text{ and } R$ are the real roots, then $PQ + QR + PR$ is _____________
39. $5^{-1} + x^{-1} = 3^{-1}$, then $2x = $ _____________
40. $43821 \div 126 = $ _____________
41. Find $k$ such that $7k6$ is the smallest 3-digit number divisible by 9 _____________
42. If $512 = x^2 - y^2$ and $x, y$ are positive triangular numbers, then $x = $ _____________
43. Find the area of a triangle with side lengths of 11 cm, 60 cm, and 61 cm. _____________ cm$^2$
(44) A triangle has sides of 9, x, and 13. What is the greatest integral value of x? ________________

(45) \(5^3 \times 2^5 = \) ________________

(46) If \(xy = 2\) and \(x + y = 4\), then \(x^3 + y^3 = \) ________________

(47) The next term of the sequence 4, 11, 18, 25, ... is ________________

(48) If \(4 - 5x > 3\), then \(x < \) ________________

(49) \(3!2 = \) ________________ 2

*(50) \(3^9 \div 6^6 \times 9^4 = \) ________________

(51) \(\frac{3}{4} + \frac{1}{2} + \frac{1}{3} + \ldots = \) ________________

(52) The legs of a right triangle are 8 and 15. The length of the altitude to the hypotenuse is ________________

(53) \((4 - i)^2 = a + bi\), and \(a = \) ________________

(54) Let \(\frac{7!}{5!} = \frac{(x - 1)!}{(x - 2)!}\). Find \(x\). ________________

(55) \(12.5\% \) of 1 quart = ________________ ounces

(56) \(\log_4 32 + \log_4 2 + \log_4 1 = \) ________________

(57) \(126 \times 214 = \) ________________

(58) \(5772 \div 111 = \) ________________

(59) \(221 \times 141 = \) ________________

*(60) \(16 \times 18 \times 20 = \) ________________

(61) \((2 + 3i)(4 - 5i) = a + bi\) and \(b = \) ________________

(62) If \(\sin \theta = .1\), then \(\csc \theta = \) ________________

(63) The sum of the coefficients of \((a + b)^3\) is ________________

(64) If flipping 5 coins, what is the probability of getting 3 tails and 2 heads? ________________

(65) 24 is ________________ % of 192

(66) The volume of a sphere with radius 3 in. is \(k\pi\) cu. in. and \(k = \) ________________

(67) If \(x > 0\) and \(x + 1 = \sqrt{x^2 - 3x + 11}\), then \(x = \) ________________

(68) Let \(f(x) = [x]\) be the greatest integer function. Find \(f(3\sqrt{3})\). ________________

*(69) \((66a)(77a) \div 8\) has a remainder of ________________

*(70) \(314 \times 27.2 \times 1.62 = \) ________________

(71) Find \(k\), \(0 < k < 5\), if \(4k - 1 \equiv 1\) (mod 6). ________________

(72) The greatest integer function is \(f(x) = [x]\). Find \(f(\sqrt{10})\). ________________

(73) A number is randomly selected from the set of digits. What is the probability that the number is a perfect number? ________________ (proper fraction)

(74) \(\int_0^\infty x^2 \, dx = \) ________________

(75) \(6^3 - 5^3 + 4^3 = \) ________________

(76) The smaller root of \(8x^2 + 25x + 3 = 0\) is ________________

(77) If \(f(x) = 2 + \frac{3}{4 - x}\), then \(f^{-1}(5) = \) ________________

(78) \(1^3 + 2^3 + 3^3 + 4^3 + 5^3 = \) ________________

(79) Find the slope of the tangent to \(y = x^2 - 1\) at \((2, 3)\). ________________

*(80) \(285714 \times .28 = \) ________________