_____1. (9999)(9) = ?

_____2. 8642 – 1357 = ?

_____3. What is the fifth term of an arithmetic sequence with first term 2 and common difference -11?

_____4. What is the larger solution of $2x^2 - 5x + 3 = 0$?

_____5. $5^4 + 3^2 + 1^0 = ?$

_____6. If 2x – 9 = 9x + 2, then x = ?

_____7. $11^4 + 11^3 = 121x$; $x = ?$

_____8. What is the third-largest positive integral factor of 462?

_____9. $\log_{216}\left(\log_2 64\right) = ?$

_____10. What is the remainder when 2010 is divided by 13?

_____11. (2010)(1990) = ?

_____12. How many primes are less than 90 but greater than 70?

_____13. If 3x + y = 10 and x – y = -2, then xy = ?

_____14. Simplify $\frac{3}{4} + \frac{5}{6} + \frac{7}{8}$ as an improper fraction.

_____15. $123_4 = ?_{10}$

_____16. $4^x = 8^{x+1}$; $x = ?$

_____17. What is the length of the hypotenuse of a right triangle with legs measuring 630 and 840?

_____18. If (x, y) is the hole in the graph of $y = \frac{x^2 - 100}{x - 10}$, then $xy = ?$

_____19. $(42)\left(21\frac{8}{21}\right) =$

_____20. What is the units digit of $4^6 + 6^4$?

_____21. How many days are in 52 weeks?

_____22. If $\sqrt{12} + \sqrt{75} = a\sqrt{3}$, then $12a = ?$

_____23. What is the smallest Fibonacci number greater than 75?

_____24. $0.08\overline{3} + 0.\overline{1} = \frac{x}{36}$; $x = ?$

_____25. What is the product of the solutions of $4(x-6)^2 = 100$?

_____26. $123456 \div 8 = ?$

_____27. $\left(5 + 3\sqrt{7}\right)\left(5 - 3\sqrt{7}\right) = ?$

_____28. A square has side length 6. What is the area of a circle circumscribed about this square?

_____29. Find the number of zeros are at the end of the decimal number representation of $2010!$.

_____30. What is the sum of all prime factors of 2010?

_____31. What obtuse angle measure do the hands of a clock make at 6:15? (in degrees)

_____32. How many 3-digit perfect cubes end in the digit 5?

_____33. $98^2 - 88^2 = ?$

_____34. 8 – 4 + 2 – 1 + ... = ?

_____35. A polygon with 35 diagonals has how many sides?

_____36. If $a \otimes b = \frac{ab}{3}$, find $(6 \otimes 9) \otimes 12$.

_____37. If $A = \begin{bmatrix} 2 & 5 \\ 6 & 3 \end{bmatrix}$ and $A^{-1} = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$, then $b = ?$

_____38. $\frac{5! + 4!}{3! + 2!} = ?$

_____39. If X is 40% of 85, then what is 20% of X?

_____40. If $\lfloor x \rfloor$ denotes the greatest integer value of x, then what is the value of $\lfloor \pi \rfloor + \lfloor e \rfloor - \lfloor \log 10^{11.12} \rfloor$?