Name: _____
School: _____

1. _____ Evaluate $1 + 2$.
2. _____ Find the number of integral (positive or negative) divisors of 412.
3. _____The sum of the roots of $x^2 - 200x + 11 = x$ is:
4. _____$2012^2 - 2011^2$=
5. _____The area of the conic $x^2 + 4x + y^2 = 4$ is:
6. _____If $x + 2y = 7$, and $x + hy = 11$, and $y = 2$, then $h =$
7. _____In regular hexagon $ABCDEF$, $AB = 1$. The area of $ABCDEF$ is:
8. _____1+2+3+...+80=
9. _____$x + 3 = 2$, then x is:
10. _____$11 \times 74598 =$
11. _____If $\frac{x}{y} + \frac{y}{x} = 2$, then $\frac{x}{y} =$
12. _____$x^2 - 2x - 3 = 0$, the largest possible x is:
13. _____If two days before yesterday was the day after Saturday, tomorrow is:
14. _____If $3x + 2y = 1$, then the y-coordinate of the y-intercept is:
15. _____If $|3x| = 5$, then x^2 is:
16. _____The volume of a cylinder with radius 3 and height 5 is:
17. _____If three Hunds are an Aufbau, and four Aufbau are in a Pauli, then the number of Hunds in thirty Paulis is:
18. _____n cuts are made in a plane, separating it into 7 regions. The minimum n is:
19. _____In a cube the sum of the nonzero volume and the surface area equals the side length; the side length is:
20. _____The constant term in the expansion of $(2x + \frac{1}{3x})^4$ is:
21. _____In right triangle ABC, $AB = BC = 2$, then AC=
22. _____The smallest possible area of a right triangle with side lengths 3 and 4 is:
23. _____Evaluate $\sum_{n=1}^{\infty} \frac{3^n + 2^n}{(3+2)^n}$
24. _____$(\sqrt{5})^4 - 4(\sqrt{5})^3 \left(\frac{\sqrt{5}}{2}\right) + 6(\sqrt{5})^2 \left(\frac{\sqrt{5}}{2}\right)^2 - 4(\sqrt{5}) \left(\frac{\sqrt{5}}{2}\right)^3 + \left(\frac{\sqrt{5}}{2}\right)^4 =$
25. _____The volume of a cone with height 4 and radius 2 is:
26. _____The number of permutations of "FUNKFUNKY" is:
27. _____If a number x is such that $\sqrt[2011]{x} = -1$ and x is real, then x=
28. _____If fifty men can make fifty sandwiches in fifty hours, the number of sandwiches one man can make in one hour is:
29. _____The area of the triangle with vertices (-1,5),(-3,2), and (2,1) is:

30. _____$\sqrt{4489} =$

31. _____$(53)(117)=$

32. _____$\sum_{n=1}^{\infty} \frac{1}{5^n}=$

33. _____$\binom{2012}{2011}=$

34. _____The area of the region bound by $y = x$, $y = 2x$, $y = 0$ and $y = 3$ is:

35. _____The 20^{th} smallest prime number is:

36. _____The y coordinate of the center of $\frac{(y-123452)^2}{13456} + \frac{(x-124985)^2}{98498} = 73294$ is:

37. _____$A + B = 7$, $AB = -2$, then $A^2B + B^2A=$

38. _____$2^4 + 4^2 =$

39. _____1.01+4.02+9.03+16.04+25.05+36.06+49.07+...+100.1

40. _____The greatest integer less than $e + \pi + \phi + 2 + \sqrt{2 + \sqrt{2 + \sqrt{2 + \sqrt{2} + ...}}} + \frac{1000000001}{1000000000} + 2011 + e^{\pi i}$