

Calculator Team 2016- Team Member #1

Place your answer on the appropriate blank of the answer sheet. Give an exact answer whenever possible. Otherwise, round to 3 decimal places.

1. Let $f(x) = x^3 + 3x^2 - x + 1$. Find $f(1.85)$.
2. What is the remainder of 159400 divided by 27?
3. Compute $\left(\frac{59.126}{7.391} - 0.649\right) \times 0.371$.
4. Compute $1.82 \times \left[2.27(0.38 + 0.81)^2 + \frac{3.72}{9.18}\right]$.
5. Compute $\frac{9!}{5!4!} \times \frac{3!3!}{6!} \times \frac{2!2!}{3!}$.
6. Compute $\log_5(15625) \times \log_5(30)$.
7. Compute $\ln(e^2) \times e^{1.64}$.
8. Compute $\frac{1}{3} \left\{ (1.51 - 2.915)^2 + (4.96 - 2.915)^2 + (3.52 - 2.915)^2 + (1.67 - 2.915)^2 \right\}$.
9. Find the sum $\log_{10}(1) - \log_{10}(2^2) + \log_{10}(3^3) - \log_{10}(4^4) + \log_{10}(5^5)$.
10. Find the sum $1 + \frac{2}{3!} + \frac{3}{5!} + \frac{4}{7!}$.
11. Compute $\sqrt{(\sqrt{20.4} - 2\sqrt{1.1})(\sqrt{20.4} + \sqrt{4.4})}$.
12. Compute $(5.27 - 2.35)(5.27^2 + (5.27)(2.35) + 2.35^2)$.
13. Compute $0.3 + 0.3(0.7) + 0.3(0.7)^2 + 0.3(0.7)^3 + 0.3(0.7)^4 + 0.3(0.7)^5$.
14. Compute $\frac{e^{-1.321}(1.312)^0}{0!} + \frac{e^{-1.321}(1.321)^1}{1!} + \frac{e^{-1.321}(1.321)^2}{2!}$.
15. Compute $\sqrt[5]{4.47}$.

Calculator Team 2016- Team Member #2

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16. Let $f(x) = x^3 + 3x^2 - x + 1$. Find $f(-1.92)$.
17. What is the remainder of 314159 divided by 17?
18. Compute $\left(\frac{61.737}{34.654} - 0.671\right) \times 0.318$.
19. Compute $2.64 \times \left[3.24(4.62 - 3.52)^3 + \frac{2.846}{2.343}\right]$.
20. Compute $\frac{11!}{5!6!} \times \frac{4!4!}{8!} \times \frac{2!2!}{4!}$.
21. Compute $\log_{10}(0.01) \times \log_{10}(93.5) \times \log_{10}(11.9)$.
22. Compute $e^{2.67} \times e^{\ln 0.125} \times \ln(e^8)$.
23. Compute $\frac{1}{3} \left\{ (0.85 - 2.915)^2 + (6.59 - 2.915)^2 + (2.35 - 2.915)^2 + (1.87 - 2.915)^2 \right\}$.
24. Find the sum $\log_{10}(10^2) \times \log_{10}(7^3) \times \log_{10}(5^4) \times \log_{10}(3^5)$.
25. Find the sum $1 + \frac{e}{1!} + \frac{e^2}{2!} + \frac{e^3}{3!}$.
26. Compute $\sqrt[5]{45.94}$.
27. Compute $\frac{1.245e^{-(1.245)^5}}{4!}$.
28. Compute $\sqrt{(3\sqrt{1.21})(1.8 + \sqrt{12.25})}$.
29. Compute $(3.82 + 2.13)(3.82^2 - (3.82)(2.13) + 2.13^2)$.
30. Compute $1 + 2(0.8) + 3(0.8)^2 + 4(0.8)^3 + 5(0.8)^4 + 6(0.8)^5$

Calculator Team 2016- Team Member #3

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31. Let $f(x) = -3x^3 + x^2 + 3x + 2$. Find $f(-1.53)$.
32. What is the remainder of 986960 divided by 27?
33. Compute $\left(\frac{35.729}{8.316} - 0.624\right) \times 0.391$.
34. Compute $3.42 \times \left[2.91(2.49 - 3.16)^2 + 0.609\right]^2$.
35. Compute $\frac{3!4!}{7!} \times \frac{9!}{5!4!} \times \frac{2!1!}{5!}$.
36. Compute $\log_3(6561) \times \log_3(6)$.
37. Compute $\ln(e^{7.23}) \times e^{\ln(0.125)} \times \ln\left(\frac{1}{e}\right)$.
38. Compute $\frac{1}{3} \left\{ (2.34 - 2.915)^2 + (3.21 - 2.915)^2 + (1.73 - 2.915)^2 + (4.38 - 2.915)^2 \right\}$.
39. Compute $\{\ln(40) + \ln(50) + \ln(60)\} - \{\ln(10) + \ln(20) + \ln(30)\}$.
40. Find the sum $\left[1 + 3 + 3^2 + 3^3 + 3^4 + 3^5 + 3^6 + 3^7\right] \div \left[3^4 - 1\right]$.
41. Compute $\sqrt[3]{244.2}$.
42. Compute $e^{-1.234} (1.234)^1 + e^{-1.234} (1.234)^2 + e^{-1.234} (1.234)^3 + e^{-1.234} (1.234)^4$.
43. Compute $\sqrt{(2.8 + 2\sqrt{4.1})(8.2 - \sqrt{16.4})}$.
44. Compute $(2.6 + 4.3)(2.6^2 + (2.6)(4.3) + 4.3^2)$.
45. Compute $0.4 + 0.4(0.6) + 0.4(0.6)^2 + 0.4(0.6)^3 + 0.4(0.6)^4 + 0.4(0.6)^5$.

Calculator Team 2016- Team Member #4

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46. Let $f(x) = 5x^3 - x^2 - 2x + 3$. Find $f(-1.23)$.
47. What is the remainder of 310000 divided by 23?
48. Compute $\left(\frac{5.716}{2.163} - 1.317\right) \times 0.951$.
49. Compute $3.54 \times \sqrt{2.97(5.34 + 4.31)^2 + 0.97}$.
50. Compute $\frac{10!}{3!7!} \times \frac{2!4!}{6!} \times \frac{2!3!}{6!}$.
51. Compute $\log_2(8) \times \log_2(2) \times \log_2(0.125)$.
52. Compute $e^{-\ln(1.35)} \times e^{1.25} \times \ln(2e)$.
53. Compute $\frac{1}{4} \left\{ (1.80 - 2.315)^2 + (2.49 - 2.315)^2 + (3.21 - 2.315)^2 + (1.76 - 2.315)^2 \right\}$.
54. Compute $\{ \log_3(3) \times \log_3(9) \times \log_3(243) \} - \{ \log_2(2) \times \log_2(16) \}$.
55. Find the sum $1 + 1.1^2 + 1.1^4 + 1.1^6 + 1.1^8 + 1.1^{10}$.
56. Compute $\sqrt[4]{14.76}$.
57. Compute $e^{-1.034} (1.034)^0 + e^{-1.034} (1.034)^1 + e^{-1.034} (1.034)^2 + e^{-1.034} (1.034)^3$.
58. Compute $\sqrt{(3.6 - \sqrt{8.4})(3.6 + 3\sqrt{2.1})}$.
59. Compute $(7.3 + 2.1)(7.3^2 + (7.3)(2.1) + 2.1^2)$.
60. Compute $0.3 + 0.3(0.7) + 0.3(0.7)^2 + 0.3(0.7)^3 + 0.3(0.7)^4 + 0.3(0.7)^5$.