

Practice Test—4 October 2005

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1. $4214 + 3421 =$ _____ .
2. $376 - 763 + 637 =$ _____ .
3. $416 \times 11 =$ _____ .
4. $20\% =$ _____ (fraction).
5. $75 \times 25 =$ _____ .
6. Which is larger: $\frac{7}{8}$ or $\frac{7}{9}$? _____ .
7. $23^2 =$ _____ .
8. 48 inches = _____ feet.
9. Find the GCD of 68 and 74. _____ .
- (*) 10. $53 - 163 + 594 + 414 =$ _____ .
11. 5% of 80 = _____ .
12. $6\frac{4}{11} \times 5\frac{4}{11} =$ _____ (mixed number).
13. $705 \times 15 =$ _____ .
14. LXXIX = _____ (Arabic numerals).
15. $547 \div 9 =$ _____ (mixed number).
16. 42 increased by what percent is 49?
_____ (mixed number).
17. $\frac{33}{2^3} =$ _____ (decimal).
18. $32 \times 15 =$ _____ .
19. $1 - 2 + 3 - 4 + \dots + 13 - 14 =$ _____ .
- (*) 20. $652 \times 398 =$ _____ .
21. $49 \times 286 =$ _____ .
22. $\frac{1}{2} - \frac{1}{8} - \frac{1}{32} =$ _____ .
23. $5.7 \times 4.3 =$ _____ .
24. The cube root of 456533 is _____ .
25. $91 \times 99 =$ _____ .
26. $96 + 98 + 100 + 102 + 104 =$ _____ .
27. $47 \times 67 =$ _____ .
28. $(\sqrt{25} - \sqrt{49})^3 =$ _____ .
29. $.49999\dots =$ _____ (fraction).
- (*) 30. $18 \times 42 \times 36 =$ _____ .
31. $103 \times 105 =$ _____ .
32. If 10 apples cost \$1.20, then 3 dozen apples cost
\$ _____ .
33. A number x , $x \geq 1$, is added to its reciprocal to
equal $2x$. Find x . _____ .
34. $3 \times 5 - 7 \times 9 =$ _____ .
35. $1\frac{1}{2}$ gallons = _____ pints.
36. $24 \times 1.375 =$ _____ .
37. If $f(x) = 2x - 7$, find $f(4)$. _____ .
38. $110000_2 =$ _____ $_8$.
39. Solve for x : $8x - 17 = 6x + 21$ _____ .
- (*) 40. $\sqrt{984269} =$ _____ .
41. $45 \times 45 =$ _____ .
42. $289^{1/2} =$ _____ .

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43. If $5x - 22 \geq 33$, then $x \geq$ _____ .
44. 13.5% of 72 is _____ % of 54.
45. $74^2 + 75^2 =$ _____ .
46. $86 \times 84 + 1 =$ _____ .
47. If $3^{2x-1} = 27^x$, then $x =$ _____ .
48. The next term in the sequence 1, 2, 6, 15, 31, ... is _____ .
49. $125 \times 36 =$ _____ .
- (*) 50. $7^3 \times 6^2 \times 5 =$ _____ .
51. $(3 - 4i)(3 + 4i) =$ _____ .
52. Two numbers are in a ratio 2 : 3. If their sum is 95, find the larger number. _____ .
53. The diagonal of a square is $15\sqrt{2}$ inches. The area of the square is _____ square inches.
54. If $y = -3x$ and $4x + 2y = 4$, then $x =$ _____ .
55. $18 \times 33\frac{1}{3} =$ _____ .
56. $\frac{3! \times 4 - 3 \times 4!}{3!} =$ _____ .
57. $35^2 + 27^2 - 8^2 =$ _____ .
58. ${}_5P_2 =$ _____ .
59. The interior angles of a regular hexagon each measure _____ degrees.
- (*) 60. $2857 \times 213 =$ _____ .
61. $\sin^{-1}(0) =$ _____ radians.
62. $\cos 2\pi =$ _____ .
63. $\frac{2}{37} \times 222 =$ _____ .
64. If $\cos x = \frac{5}{13}$ and $0 < x < \frac{\pi}{2}$, then $\sin x =$ _____ .
65. The smallest integer value of x such that $4x + 7 > 8$ is _____ .
66. $\frac{7\pi}{12}$ radians = _____ °.
67. $e^{\ln 18} =$ _____ .
68. $\cos^{-1}\left(-\frac{1}{2}\right) =$ _____ degrees.
69. $(\log_2 4)(\log_2 8) =$ _____ .
- (*) 70. $222133 \div 6.7 \div 61 =$ _____ .
71. The fifth triangular number is _____ .
72. If $7x - 3 \equiv 2 \pmod{11}$ and $0 \leq x \leq 10$, then $x =$ _____ .
73. $\frac{3}{10} + \frac{10}{3} - 2 =$ _____ (mixed number).
74. The radius of a circle inscribed in a 9,12,15-right triangle is _____ .
75. $\sin^2(\pi/6) + \cos^2(\pi/6) =$ _____ .
76. Change .33 in base 4 to a base 10 fraction. _____ .
77. $\lim_{x \rightarrow 2} \frac{4}{x} - x^2 =$ _____ .
78. $\int_1^3 (x - 3x^2) dx =$ _____ .
79. $\frac{1}{10} + \frac{1}{15} + \frac{1}{21} =$ _____ .
- (*) 80. The area of the ellipse whose equation is $41x^2 + 39y^2 = 41(39)$ is _____ .