

Exercises

Add in base 5.

1. $4_5 + 4_5$
2. $3_5 + 3_5$
3. $23_5 + 33_5$
4. $34_5 + 40_5$
5. $124_5 + 214_5$
6. $304_5 + 133_5$
7. $441_5 + 323_5$
8. $430_5 + 142_5$

Add in base 8.

9. $7_8 + 6_8$
10. $6_8 + 5_8$
11. $14_8 + 37_8$
12. $53_8 + 27_8$
13. $135_8 + 463_8$
14. $572_8 + 123_8$
15. $564_8 + 632_8$
16. $724_8 + 637_8$

Add in base 2.

17. $110_2 + 101_2$
18. $100_2 + 111_2$
19. $1110_2 + 1010_2$
20. $1001_2 + 1011_2$

Add in base 16.

21. $A25_{16} + 692_{16}$
22. $7E9_{16} + 542_{16}$
23. $AA8_{16} + 237_{16}$
24. $BA3_{16} + 249_{16}$

Subtract in base 6.

25. $52_6 - 45_6$
26. $44_6 - 35_6$
27. $551_6 - 423_6$
28. $453_6 - 125_6$
29. $341_6 - 252_6$
30. $315_6 - 145_6$
31. $403_6 - 254_6$
32. $502_6 - 343_6$

Subtract in base 9.

33. $71_9 - 28_9$
34. $23_9 - 14_9$
35. $305_9 - 152_9$
36. $351_9 - 180_9$
37. $605_9 - 258_9$
38. $705_9 - 238_9$
39. $247_9 - 168_9$
40. $654_9 - 587_9$

Construct the single digit multiplication table for each of the following bases.

41. Base 4
42. Base 6
43. Base 5
44. Base 7

Multiply the numbers in the given bases and express your answer in the same base.

45. $21_3 \times 2_3$
46. $22_3 \times 2_3$
47. $4_5 \times 3_5$
48. $4_5 \times 4_5$
49. $14_5 \times 2_5$
50. $12_5 \times 4_5$

51. $10_8 \times 3_8$

52. $12_8 \times 5_8$

53. $17_8 \times 2_8$

54. $16_8 \times 4_8$

Divide the given numbers in the given bases and express your answer in the same base.

55. $20_8 \div 4_8$

56. $33_8 \div 3_8$

57. $14_8 \div 6_8$

58. $24_8 \div 5_8$

59. $14_5 \div 3_5$

60. $22_5 \div 4_5$

61. $33_5 \div 3_5$

62. $40_5 \div 2_5$

63. $22_3 \div 2_3$

64. $21_3 \div 10_3$