

## Problems

Add the following columns of numbers. Check your answers by adding the numbers in reverse order and by casting out nines.

| 1.   | 2.   | 3.    |
|------|------|-------|
| 594  | 366  | 2.20  |
| 12   | 686  | 4.62  |
| 511  | 469  | 1.73  |
| 199  | 2010 | 32.30 |
| 3982 | 62   | 3.02  |
| 291  | 500  | 0.39  |
| 1697 | 4196 | 5.90  |

Do the following subtraction problems by first mentally computing the cents, then the dollars. Complements will often come in handy. Check your answers with an addition problem and with casting out nines.

4.  $1776.65 - 78.95$

5.  $5977.31 - 842.78$

6.  $761.45 - 80.35$

Use the criss-cross method to do the following multiplication problems. Verify that your answers are consistent with casting out nines.

7.  $29 \times 82$

8.  $764 \times 514$

9.  $5593 \times 2906$

10. What is the remainder (not the quotient) when you divide 1,234,567 by 9?

- 11.** What is the remainder (not the quotient) when you divide 12,345,678 by 9?
- 12.** After doing the multiplication problem  $1234 \times 567,890$ , you get an answer that looks like 700,7#6,260, but the fifth digit is smudged, and you can't read it. Use casting out nines to determine the value of the smudged number.

Use the Vedic method to do the following division problems.

- 13.**  $3210 \div 9$
- 14.**  $20,529 \div 9$
- 15.**  $28,306 \div 9$
- 16.**  $942,857 \div 9$

Use the close-together method for the following multiplication problems.

- 17.**  $108 \times 105$
- 18.**  $92 \times 95$
- 19.**  $108 \times 95$
- 20.**  $998 \times 997$
- 21.**  $304 \times 311$

*Solutions for this lecture begin on page 112.*