

Mathematics Manual for the CAST Battery

4. Do the following Scientific Notation Drills (answers , pages 203 - 205)

A. Express the following numbers in scientific notation.

- | | | | | | |
|----|---------------|-------|-----|--------------------|-------|
| 1. | 200 | _____ | 9. | 0.002 | _____ |
| 2. | 7,000 | _____ | 10. | 0.00003 | _____ |
| 3. | 50,000 | _____ | 11. | 0.00000009 | _____ |
| 4. | 100,000 | _____ | 12. | 0.000000001 | _____ |
| 5. | 9,000,000 | _____ | 13. | seven hundredths | _____ |
| 6. | 800,000,000 | _____ | 14. | one millionth | _____ |
| 7. | 4,000,000,000 | _____ | 15. | six ten-millionths | _____ |
| 8. | 6 | _____ | 16. | 11 billionths | _____ |

B. Express the following numbers in scientific notation.

- | | | | | | |
|----|-------------|-------|-----|-------------|-------|
| 1. | 4,800 | _____ | 9. | 0.025 | _____ |
| 2. | 72,000 | _____ | 10. | 0.00016 | _____ |
| 3. | 45,000,000 | _____ | 11. | 0.0000093 | _____ |
| 4. | 230,000,000 | _____ | 12. | 0.000000041 | _____ |
| 5. | 5,760 | _____ | 13. | 0.561 | _____ |
| 6. | 61,800 | _____ | 14. | 0.00381 | _____ |
| 7. | 354,000 | _____ | 15. | 0.0000367 | _____ |
| 8. | 537,000,000 | _____ | 16. | 0.000000719 | _____ |

C. Express the following numbers in scientific notation.

- | | | | | | |
|----|------------------------|-------|----|----------------------------|-------|
| 1. | 68×10^3 | _____ | 5. | 0.0000095×10^8 | _____ |
| 2. | 777×10^6 | _____ | 6. | 0.0000095×10^{-8} | _____ |
| 3. | $1,990 \times 10^{-3}$ | _____ | 7. | $810,000 \times 10^{-5}$ | _____ |
| 4. | 0.88×10^9 | _____ | 8. | 10.0×10^{-1} | _____ |

D. Replace the letter, n, with the correct exponent.

- | | | | | | |
|----|----------------------------------|-------|-----|---|-------|
| 1. | $130 = 1.3 \times 10^n$ | _____ | 9. | $0.023 = 2.3 \times 10^n$ | _____ |
| 2. | $670 = 6.7 \times 10^n$ | _____ | 10. | $0.000068 = 6.8 \times 10^n$ | _____ |
| 3. | $7,400 = 7.4 \times 10^n$ | _____ | 11. | $0.000000091 = 9.1 \times 10^n$ | _____ |
| 4. | $25,000 = 2.5 \times 10^n$ | _____ | 12. | $0.000000000041 = 4.1 \times 10^n$ | _____ |
| 5. | $8,250 = 8.25 \times 10^n$ | _____ | 13. | $0.00651 = 6.51 \times 10^n$ | _____ |
| 6. | $573,000 = 5.73 \times 10^n$ | _____ | 14. | $0.000000387 = 3.87 \times 10^n$ | _____ |
| 7. | $1,620,000 = 1.62 \times 10^n$ | _____ | 15. | $0.0000000000000314 = 3.14 \times 10^n$ | _____ |
| 8. | $278,000,000 = 2.78 \times 10^n$ | _____ | 16. | $0.00000001 = 1.0 \times 10^n$ | _____ |