

**Exercise 1.47**

Round each of the following numbers to four significant figures and express the result in standard exponential notation: (a) 102.53070, (b) 656.980, (c) 0.008543210, (d) 0.000257870, (e) -0.0357202.

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**Solution**

(a) 102.53070:  $102.5 = 1.025 \times 10^2$

(b) 656.980:  $657.0 = 6.570 \times 10^2$

(c) 0.008543210:  $0.008543 = 8.543 \times 10^{-3}$

(d) 0.000257870:  $0.0002579 = 2.579 \times 10^{-4}$

(e) -0.0357202:  $-0.03572 = -3.572 \times 10^{-2}$