

Significant Digits Review



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Transforming Numerical Methods Education for STEM Undergraduates



For more details on this topic

- Go to <http://nm.MathForCollege.com>
- Click on Introduction – Quantifying Errors



\$ 257.36

$$\alpha_{\text{steel}} = \underline{6.47} \text{ in/in/}^\circ\text{F}$$

$$= 0.\underline{00000647} \text{ in/in/}^\circ\text{F}$$

$$\alpha_{\text{steel}} = 0.000 \text{ in/in/}^\circ\text{F} \text{ (3 decimal digits)}$$

$$\Rightarrow \underline{6.47} \times 10^{-6} \text{ in/in/}^\circ\text{F}$$

1.5 million

1,500,000

1,471,968

(2019 data)

$$\Rightarrow 1.5 \times 10^6$$

$$\Rightarrow 1.471968 \times 10^6$$



2.789 — 4 sig. digits.

0.0439 — 3 sig. digits.

4.590 — 4 sig. digits.

4008 — 4 sig. digits.

4208.07 — 6 sig. digits.

4000.0 — 5 sig. digits.

4008.0 — 5 sig. digits.

15000 — $\begin{matrix} 2 \\ 3 \\ 4 \\ 5 \end{matrix}$ sig. digits.

1.5×10^3 — 2 sig. digits.

1.50×10^3 — 3 sig. digits.

1.5000×10^3 — 5 sig. digits.

END



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Numerical Methods for STEM undergraduate

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Committed to bringing numerical methods to the
undergraduate

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