

**Thomas' Calculus (11 edition)**  
**Chapter 1 Practice Exercises**  
**(pg. 69 – pg. 72)**

Functions and graphs

- 29.
- 31.
- 35.
- 39.
- 41.
- 45.
- 49.

Piecewise-defined functions

- 51.
- 53.

Composition of functions

- 55.
- 57.
- 63.
- 67.

Trigonometry

- 69.
- 73.

Additional and advanced exercise

Trigonometry

- 11.
- 13.
- 15.

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**Chapter 2 Practice Exercises**  
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Limits and continuity

- 7.
- 5.
- 3.

Finding limits

- 13.
- 15.
- 17.
- 19.

Limits at infinity

- 25.
- 27.
- 29.

Roots

- 37 (a)

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**Chapter 3 Practice Exercises**  
**(pg. 235 – pg. 240)**

Derivatives of functions

- 1.
- 3.
- 5.
- 23.
- 27.
- 31.
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- 39.

Implicit differentiation

- 41.
- 45.
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- 53.

Derivative definition

- 63.
- 67.

Slopes, tangents and normals

- 69.
- 71.
- 75.
- 77.
- 79.

Tangents and normals to implicitly defined curves

- 81.
- 85.
- 87.

Tangents to parametrised curves

- 89.

Analyzing graphs

- 93.

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103.

105.

Related rates

107.

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**Chapter 4 Practice Exercises**  
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Existence of extreme values

- 1.
- 3.
- 5.
- 7.

The mean value theorem

- 11.
- 13.
- 17.

Conclusions from graph

- 19.
- 21.

Graphs and graphing

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- 27.
- 31.
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- 45.
- 49.

Applying l'Hôpital's rule

- 53.
- 57.
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Optimisation

- 65.
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Finding indefinite integrals

- 75.
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- 83.
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**Chapter 5 Practice Exercises**  
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Finite sums and estimates

3.

Definite integrals

5.

9.

Area

11.

17.

19.

31.

Evaluating indefinite integrals

37.

41.

43.

Evaluating definite integrals

45.

51.

55.

57.

61.

65.

69.

Average values

71.

Differentiating integrals

77.

79.

Theory and examples

83.

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Length of curves

23.

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**Chapter 7 Practice Exercises**  
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Differentiation

- 3.
- 13.
- 19.
- 23.

Logarithmic differentiation

- 25.
- 29.

Integration

- 31.
- 33.
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- 59.
- 69.
- 77.

Solving equations with logarithmic or exponential terms

- 79.
- 83.

Evaluating limits

- 85.
- 91.
- 95.

Theory and applications

- 101.
- 103.
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Integration using substitutions

- 1.
- 7.
- 15.
- 19.
- 35.
- 33.
- 41.
- 43.
- 53.
- 63.
- 73.
- 81.

Integration by parts

- 83.
- 85.
- 87.
- 89.

Partial fractions

- 91.
- 97.
- 103.
- 109.

Trigonometric substitutions

- 111.
- 113.

Quadratic terms

- 115.
- 117.

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Convergence or divergence

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Assorted integrations

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Convergent or divergent sequences

- 1.
- 5.
- 11.
- 17.

Convergent series

- 19.
- 23.

Convergent or divergent series

- 25.
- 33.
- 39.

Power series

- 45.
- 47.
- 49.

Maclaurin series

- 51.
- 55.
- 59.
- 63.

Taylor series

- 65.
- 67.

Indeterminate forms

- 81.
- 85.

Theory and examples

- 91.
- 93.
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Fourier series

- 105.
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