

# Answers: Definite integration

Donald Campbell

## Summary

Answers to questions relating to the guide on definite integration.

*These are the answers to [Questions: Definite integration](#).*

**Please attempt the questions before reading these answers!**

## Answers

### Q1

- 1.1. 6
- 1.2. 0
- 1.3.  $\frac{21}{2}$
- 1.4. 120
- 1.5.  $\frac{20}{3}$
- 1.6.  $\frac{1462}{5}$
- 1.7.  $\frac{8}{3}$
- 1.8.  $\frac{171}{4}$

### Q2

- 2.1. 48
- 2.2.  $\frac{91}{3}$
- 2.3.  $\frac{52}{5}$
- 2.4. 24
- 2.5.  $-\frac{29}{6}$
- 2.6. 10

$$2.7. \quad 38$$

$$2.8. \quad 20$$

$$2.9. \quad \frac{39}{4}$$

$$2.10. \quad \frac{62}{3}$$

### Q3

$$3.1. \quad 1$$

$$3.2. \quad 0$$

$$3.3. \quad 1$$

$$3.4. \quad 0$$

$$3.5. \quad 2$$

$$3.6. \quad \frac{1}{2}$$

$$3.7. \quad 0$$

$$3.8. \quad 0$$

$$3.9. \quad \frac{1}{2}$$

$$3.10. \quad 0$$

### Q4

$$4.1. \quad \frac{\sqrt{3}}{4}$$

$$4.2. \quad -\frac{1}{3} - \frac{1}{3\sqrt{2}}$$

$$4.3. \quad \frac{\sqrt{3} + 1}{2}$$

$$4.4. \quad -\frac{\sqrt{3}}{4}$$

$$4.5. \quad 0$$

$$4.6. \quad -\frac{1}{2}$$

$$4.7. \quad 0$$

$$4.8. \quad \sqrt{2} - \frac{1 + \sqrt{3}}{2}$$

$$4.9. \quad -\frac{1}{6}$$

$$4.10. \quad -\frac{\sqrt{2}}{3}$$

---

## **Version history and licensing**

v1.0: initial version created 05/25 by Donald Campbell as part of a University of St Andrews VIP project.

[This work is licensed under CC BY-NC-SA 4.0.](#)