

No calculators will be allowed and no partial credit will be given.

1. Express the indefinite integral $\int t^{\frac{3}{4}} dt$ in terms of elementary functions. Use the symbol C to denote an arbitrary constant.
2. Express the indefinite integral $\int (x^4 + 5x^3 + 4) dx$ in terms of elementary functions. Use the symbol C to denote an arbitrary constant.
3. Express the indefinite integral $\int 4 (\sec(t))^2 dt$ in terms of elementary functions. Use the symbol C to denote an arbitrary constant.
4. Express the indefinite integral $\int (4 \sin(x) + 7e^x) dx$ in terms of elementary functions. Use the symbol C to denote an arbitrary constant.
5. Express the indefinite integral $\int \frac{4}{x^{\frac{5}{4}}} dx$ in terms of elementary functions. Use the symbol C to denote an arbitrary constant.
6. Express the indefinite integral $\int x(6x^2 + 7) dx$ in terms of elementary functions. Use the symbol C to denote an arbitrary constant.
7. Express the indefinite integral $\int \frac{4x^3 + 5x^2 - 5}{x} dx$ in terms of elementary functions. Use the symbol C to denote an arbitrary constant.
8. Express in simplified form the value of $\int_0^1 (x + 4) dx$.
9. Express in simplified form the value of $\int_0^1 (2x^2 + 4x - 1) dx$.
10. Express in simplified form the value of $\int_0^1 (2x^{\frac{5}{2}} + x^{\frac{2}{5}}) dx$.
11. Evaluate $\int_1^2 \frac{1}{x^{1/5}} dx$. Express your answer in simplified form.

1. $\frac{4t^{\frac{7}{4}}}{7} + C$

2. $\frac{x^5}{5} + \frac{5x^4}{4} + 4x + C$

3. $4 \tan(t) + C$

4. $7e^x - 4 \cos(x) + C$

5. $-\frac{16}{x^{\frac{1}{4}}} + C$

6. $\frac{3x^4}{2} + \frac{7x^2}{2} + C$

7. $-5 \ln(|x|) + \frac{4x^3}{3} + \frac{5x^2}{2} + C$

8. $\frac{9}{2}$

9. $\frac{5}{3}$

10. $\frac{9}{7}$

11. $\frac{5}{4} \cdot 2^{\frac{4}{5}} - \frac{5}{4}$