

1. Find the integral of $8x^3+1$.

- a) $2x^4+x+C$
- b) $2x^6-5x+C$
- c) $2x^4-x+C$
- d) $2x^4+x^2 C$

2. Find $\int 7x^2-x^3+2x dx$.

- a) $\frac{7x^3}{3} + \frac{x^4}{5} - \frac{2x^2}{2} + C$
 - b) $\frac{7x^3}{3} + \frac{x^4}{4} + \frac{2x^2}{2} + C$
 - c) $\frac{7x^5}{9} - \frac{x^4}{4} + \frac{2x^2}{2} + C$
 - d) $\frac{7x^3}{3} - \frac{x^4}{4} + x^2 + C$
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3. Find the integral of $2 \sin(2x+3)$.

- a) $\sin 2x+3x+C$
- b) $-\cos 2x-3x^3+C$
- c) $-\cos 2x+3x+C$
- d) $\cos x-3x+12+C$

4. Find the integral of $\int 3e^x+2/x+x^3 dx$.

- a) $3e^3 x + \frac{2}{x} - \frac{x^4}{4} + c$
 - b) $3e^x + 2 \log x + \frac{x^4}{4} + c$
 - c) $e^x + 2 \log x + \frac{x^4}{4} + c$
 - d) $3e^x - \frac{2}{x^2} + \frac{x^4}{4} + c$
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Find the integral of $\frac{4x^4-3x^2}{x^3}$.

- 5.
- a) $7x^2-3 \log x^3+C$
 - b) $2x^2-3 \log x+C$
 - c) $x^2-\log x+C$
 - d) $2x^2+3 \log x+C$

6. Find $\int 3\cos x+1/x^{2dx}$.

- a) $3 \sin x - \frac{1}{x} + C$
 - b) $2 \sin x + \frac{1}{x^3} + C$
 - c) $3 \sin 3x + \frac{1}{x} + C$
 - d) $\sin x - \frac{1}{x^2} + C$
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7. Find $\int (2 + x)x\sqrt{x} dx$.

a) $\frac{4x^{5/2}}{5} + \frac{2x^{7/2}}{7} + C$

b) $\frac{4x^{5/2}}{5} - \frac{2x^{7/2}}{7} + C$

c) $\frac{4x^{5/2}}{5} + \frac{2x^{7/2}}{7} + C$

d) $-\frac{4x^{5/2}}{5} + \frac{2x^{7/2}}{7} + C$

8. Find $\int 7x^8 - 4e^{2x} - \frac{2}{x^2} dx$.

a) $\frac{7x^9}{9} - 2e^{2x} + \frac{2}{x} + C$

b) $\frac{7x^4}{4} + 2e^{2x} + \frac{2}{x} + C$

c) $\frac{7x^4}{4} - 2e^{2x} \frac{2}{x^2} + C$

d) $\frac{7x^4}{8} + 2e^{2x} - \frac{4}{x} + C$

9. Find the integral $\int \sin 2x + e^{3x} - \cos 3x dx$.

a) $-\frac{\sin 2x}{2} + \frac{e^{3x}}{3} - \frac{\sin 3x}{3} + C$

b) $-\frac{\cos 2x}{2} + \frac{e^{3x}}{3} - \frac{\sin 3x}{3} + C$

c) $\frac{\cos 2x}{2} + \frac{e^{3x}}{3} - \frac{\cos 3x}{3} + C$

d) $-\frac{\cos 2x}{2} - \frac{e^{3x}}{3} + \frac{\cos 3x}{3} + C$

10. Find the integral of $(ax^2+b)^2$.

a) $\frac{a^2 x^5}{5} + b^2 x + \frac{2abx^3}{3} + C$

b) $-\frac{a^2 x^5}{5} - b^2 x + \frac{2abx^3}{3} + C$

c) $\frac{b^2 x^5}{5} + b^2 x + \frac{27x^3}{3} + C$

d) $\frac{a^2 x^5}{5} + x + \frac{2abx^3}{5} + C$

11. Integrate $2 \sin^2 x + \cos^2 x$.

- a) $\frac{3x}{2} + \frac{\sin 2x}{4} + C$
 b) $\frac{3x}{2} - \frac{\sin 2x}{4} + C$
 c) $\frac{x}{2} + \frac{\sin 2x}{4} + C$
 d) $\frac{3x}{4} - \frac{2\sin 2x}{2} + C$

12. Integrate $8 \tan^3 x \sec^2 x$.

- a) $2 \tan^4 x + C$
 b) $4 \cot^4 x + C$
 c) $2 \tan^3 x + C$
 d) $\tan^4 x + C$

13. Find the integral of $\frac{\cos^2 x - \sin^2 x}{7 \cos^2 x \sin^2 x}$

- a) $-\frac{1}{7} (\cot x - \tan x) + C$
 b) $-\frac{1}{7} (\cot x - 2 \tan x) + C$
 c) $-\frac{1}{7} (\cot x + \tan x) + C$
 d) $-\frac{1}{7} (2 \cot x + 3 \tan x) + C$

14 Find $\int \sin^2(8x+5) dx$

- a) $\frac{x}{4} + \frac{\sin(16x+10)}{32} + C$
 b) $\frac{x}{2} - \frac{\cos(16x+10)}{32} + C$
 c) $\frac{x}{2} - \frac{\sin(16x+10)}{32} + C$
 d) $\frac{x}{2} + \frac{\cos(16x+5)}{32} + C$

15. Find $\int \frac{5 \cos^2 x}{1 + \sin x} dx$.

- a) $-3(x + \cos x) + C$
 b) $5(x + \cos x) + C$
 c) $5(-x + \sin x) + C$
 d) $5(x - \cos x) + C$

16. Find the integral of $\frac{e^{-x}(1-x)}{\sin^2(xe^{-x})}$.

- a) $\cot x e^{-x} + C$
 b) $-\cot x e^{-x} + C$

- c) $-\cot x e^x + C$
 d) $-\cos^2 x e^x + C$

17. Integrate $\frac{2\cos 2x}{(\cos x - \sin x)^2}$

- a) $-\log(1+2\sin 2x)+C$
 b) $14 \log(1-\sin 2x)+C$
 c) $-14 \log(1+\cos 2x)+C$
 d) $-\log(1-\sin 2x)+C$

18. Integrate $\sin^3(x+2)$.

- a) $\frac{3}{4} (\sin(x+2)) + \frac{1}{12} \cos(3x+6) + C$
 b) $-\frac{3}{4} (\cos(x+2)) - \frac{1}{5} \cos(3x+6) + C$
 c) $-\frac{3}{4} (\cos(x+2)) + \frac{1}{12} \cos(3x+6) + C$
 d) $-\frac{3}{4} (\cos(x+2)) + \frac{1}{12} \sin(x+2) + C$

19. Integrate $2x \cos(x^2+3)$.

- a) $\sin(x^2+3)+C$
 b) $\sin^2(x^2+3)+C$
 c) $\cot(x^2+3)+C$
 d) $-\sin(x^2+3)+C$

20. Find $\int 2 \sin^3 x + 1 \, dx$

- a) $\frac{3}{2} - \frac{\cos 3x}{6} + x + C$
 b) $-\frac{3}{2} \cos x + \frac{\cos 3x}{6} + x + C$
 c) $-\frac{3}{2} \cos x - \frac{\cos 3x}{6} - x + C$
 d) $-\frac{3}{2} \cos x + \frac{\cos 3x}{6} + C$

Answers-1.(a) 2.(d) 3.(c) 4.(b) 5.(b) 6.(a) 7.(c) 8.(a) 9.(b) 10.(a)

11.(b) 12.(a) 13.(c) 14.(c) 15.(b) 16.(b) 17.(d) 18.(c) 19.(a) 20.(B).