

Question 1: Determine $\int x^2 e^{2x} dx$

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Question 2: Determine $\int \arcsin(x) dx$

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Question 3: Determine $\int_0^{\pi/4} \tan^4(t) dt$

[5]

Question 4: Determine $\int \sin^3\theta \cos^4\theta d\theta$

[5]

Question 5: Determine $\int \frac{1}{x^2\sqrt{4-x^2}} dx$

Question 6: Determine $\int \frac{x^2 - x + 6}{x(x^2 + 3)} dx$

Question 7: Determine $\int \frac{1}{x^2 + 4x + 7} dx$

[5]

Question 8: Determine $\int \frac{x^3}{\sqrt{x^2 + 4}} dx$

[5]
