

Integration

1. Find:

a) $\int (x^3 + 2x + x^{\frac{1}{2}} + 1) dx$ b) $\int (x^3 + \frac{1}{\sqrt{x}}) dx$

c) $\int (5 + 3x)^2 dx$ d) $\int \frac{(x^3 - 5x)}{\sqrt{x}} dx$

2. Evaluate:

a) $\int_{-2}^2 (6x^2 - 1) dx$ b) $\int_1^9 \frac{(x+1)}{\sqrt{x}} dx$

3. Find the value of P for which

$$\int_0^P (2x + 3) dx = 4$$

4. Calculate the shaded area in each graph.

