

49. If $\int_1^2 (2x - x^2) dx = \frac{2}{3}$ and $\int_2^4 (2x - x^2) dx = \frac{-2}{3}$
 what does $\int_1^4 (x^2 - 2x) dx$ equal?

$$\begin{aligned} \rightarrow \int_1^4 (x^2 - 2x) dx &= \int_1^2 (x^2 - 2x) dx + \int_2^4 (x^2 - 2x) dx \\ &= \frac{-2}{3} + \frac{20}{3} \\ &= \frac{18}{3} = 6 \end{aligned}$$

المعطى السؤال
عند الأقسام الجوابه الاسارة

50. If $\int_1^2 (2x - x^2) dx = \frac{2}{3}$, what does $\int_1^2 6(2x - x^2) dx$ equal?

$$\begin{aligned} \rightarrow \int_1^2 6(2x - x^2) dx &= 6 \int_1^2 (2x - x^2) dx \\ &= 6 \left(\frac{2}{3} \right) = \frac{12}{3} = \boxed{4} \end{aligned}$$

51. $\int_4^4 \sqrt{x^2 - 2} dx = 0$
 لأن الحد الأعلى = الحد الأدنى