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$$\rightarrow 2 \int_0^b e^{-x} dx = -2e^{-x} \Big|_0^b$$

$$\Rightarrow \langle l_0, l_2 \rangle = \lim_{b \rightarrow \infty} \left[-e^{-x} \Big|_0^b + 2 \left[-xe^{-x} \Big|_0^b - e^{-x} \Big|_0^b \right] + \dots \right. \\ \left. \dots - 4 \left[-xe^{-x} \Big|_0^b - e^{-x} \Big|_0^b \right] + \dots \right]$$

$$\dots - 2 \left[e^{-x} \Big|_0^b \right] = 0$$

$$\langle l_0, l_2 \rangle = \lim_{b \rightarrow \infty} \left[\left[e^{-b} - e^0 \right] - 2 \left[be^{-b} - 0 \right] + 4 \left[(be^{-b} - 0) + (e^{-b} - e^0) \right] + \dots \right. \\ \left. \dots - 2 \left[e^{-b} - e^0 \right] \right] = 0$$

$$= \lim_{b \rightarrow \infty}$$

29th June, 1:00 PM

WKN D GMS CHOICE

WATER 4 CARS (MAY)