

* Ch 13 :- The Definite integrals:-

- Sec 13.1 :

$$\boxed{10} \int_{-1}^4 (6x - 9) dx$$

$$= \frac{6x^2}{2} - 9x \Big|_{-1}^4$$

$$= 3x^2 - 9x \Big|_{-1}^4$$

$$= (3(4)^2 - 9(4)) - (3(-1)^2 - 9(-1))$$

$$= 12 - 12$$

$$= 0$$

$$\boxed{20} \int_0^0 (3x^2 - 2)^4 x dx = 0$$

lower limit = upper limit
الحده السفلى = الحده العلوية

$$\boxed{30} \int_0^1 \frac{3x^3}{4x^4 + 9} dx$$

$$\frac{3}{16} \int_0^1 \frac{16x^3}{4x^4 + 9} dx = \frac{3}{16} \ln|4x^4 + 9| \Big|_0^1$$

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