INTEGRATING THE EXPONENTIAL FUNCTION

1 Write a primitive function for each of the following:

(a) e^{2x} **(b)** e^{5x} **(c)** $e^{-0.4x}$ **(d)** $5e^{2.5x}$ **(e)** $e^{x}+e^{-3x}$ **(f)** $e^{-2x}-e^{-x}$

2 Find: **(a)** $\int e^{-x}\,dx$ **(b)** $\int e^{\frac{x}{2}}\,dx$ **(c)** $\int e^{-3x}\,dx$

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(d) $\int \left(e^{-t} - 1\right) dt$ (e) $\int \left(e^{2u} + u^2\right) du$ (f) $\int \left(e^{-2.5x} + e^{0.4x}\right) dx$