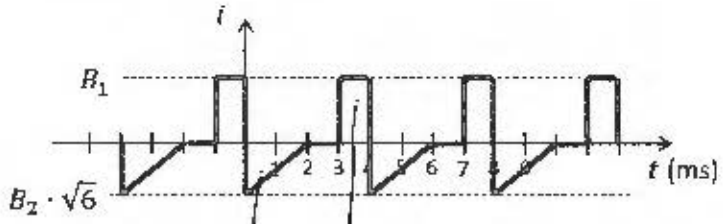
Find I_{rms} for this waveform.

B1 : 6 A

B2 : -4 A



$i(t) = 6 \Rightarrow i(t)^2 = 36$

$i(t) = 2\sqrt{6}(t-2) \Rightarrow i(t)^2 = 24(t-2)^2$

$$\int_0^4 i^2 dt = \int_0^2 24(t-2)^2 dt + \int_3^4 36\, dt$$

$$= 24 \left.\frac{(t-2)^3}{3}\right|_0^2 + 36$$

$$= 8 \cdot (0 - (-2)^3) + 36$$

$$= 64 + 36$$

$$= 100$$

$$\sqrt{\frac{1}{4}\int_0^4 i^2 dt} = \sqrt{\frac{1}{4} \cdot 100} = 5 \Rightarrow \boxed{I_{RMS} = 5A}$$