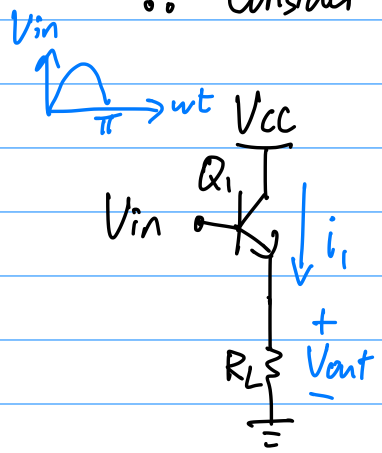
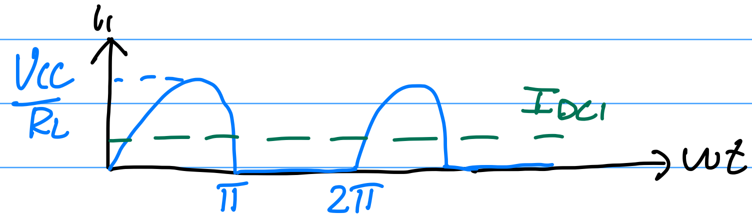
During the positive half of the sine wave, Q_2 is approx. an open circuit.
$\therefore$ Consider the simplified circuit:



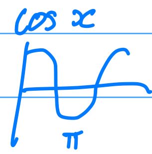
$$V_{out}(\text{peak}) \approx V_{cc}$$
$$\therefore V_{out} = V_{cc} \sin \omega t$$
$$\therefore i_1 = \frac{V_{cc}}{R_L} \sin \omega t$$



The DC current is the average of i_1.

not 2π $\because$ integrand is 0 from π to 2π.

$$I_{DC1} = \frac{V_{cc}}{R_L}\frac{1}{2\pi}\int_0^{\pi} \sin x \, dx$$
$$= \frac{V_{cc}}{R_L}\frac{1}{2\pi}\Big[-\cos x\Big]_0^{\pi}$$
$$= \frac{V_{cc}}{R_L}\frac{1}{2\pi}\left([+1]-[-1]\right)$$
$$= \frac{V_{cc}}{\pi R_L}.$$



Q_2 conducts in a symmetrical way so its DC current is also $I_{DC2} = \dfrac{V_{cc}}{\pi R_L}$.

$\therefore$ Total DC Power $P_{DC} = V_{cc}(I_{DC1} + I_{DC2})$

$$= \frac{2V_{cc}^2}{\pi R_L}$$

(b) V_{out} is a sine wave with RMS value $\frac{V_{CC}}{\sqrt{2}}$.

$$\therefore P_{AC} = \left(\frac{V_{CC}}{\sqrt{2}}\right)^2 \cdot \frac{1}{R_L} = \frac{V_{CC}^2}{2R_L}.$$

(c)
$$\eta = \frac{P_{AC}}{P_{DC}}$$
$$= \frac{\left(\frac{V_{CC}^2}{2R_L}\right)}{\left(\frac{2V_{CC}^2}{\pi R_L}\right)}$$
$$= \frac{\pi}{4}.$$