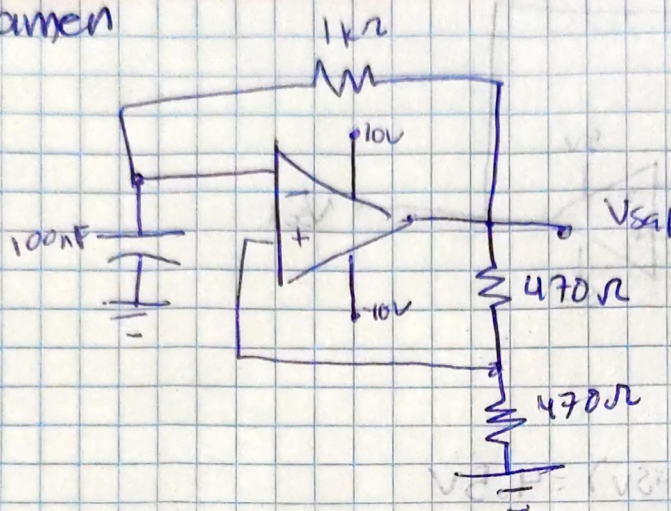


Examen

0



$$+V_{sat} = 90\% \cdot (+V_{cc}) = 90\% \cdot (+10V) = +9V$$

$$-V_{sat} = 90\% \cdot (-V_{cc}) = 90\% \cdot (-10V) = -9V$$

$$\beta = \frac{R_2}{R_1 + R_2} = \frac{470\Omega}{470\Omega + 470\Omega} = 0.5$$

$$PDS = (+V_{sat}) \beta = (+9V) 0.5 = +4.5V$$

$$PDF = (-V_{sat}) \beta = (-9V) 0.5 = -4.5V$$

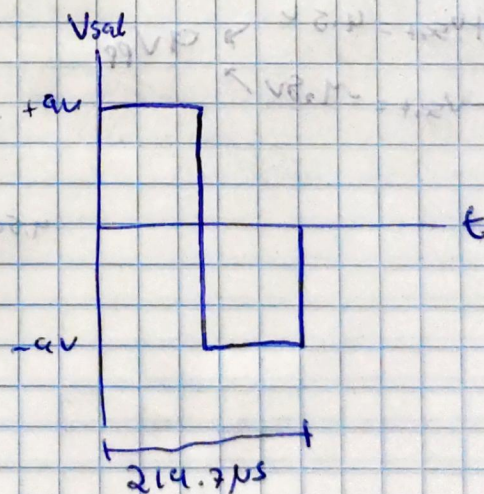
$$T = 2RC \ln\left(\frac{1+\beta}{1-\beta}\right) = 2(1k\Omega)(100nF) \ln\left(\frac{1+0.5}{1-0.5}\right) = 219.7\mu s$$

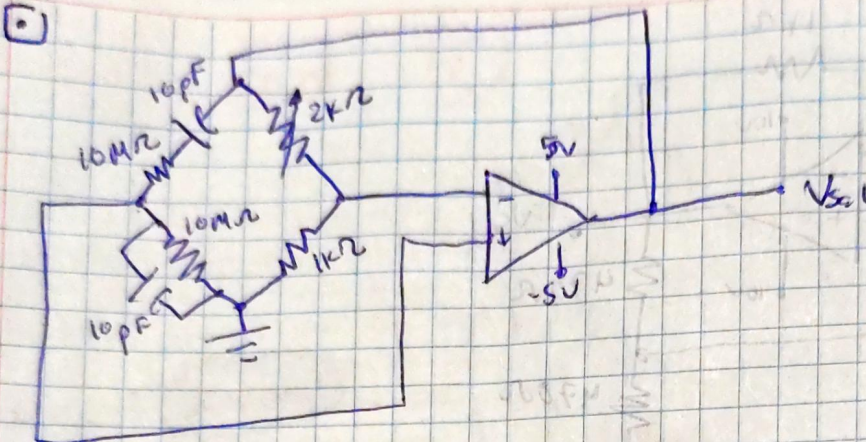
$$F = \frac{1}{T} = \frac{1}{219.7\mu s} = 4.55 kHz$$

$$V_{sat} \rightarrow +V_{sat} = +9V$$

$$\rightarrow -V_{sat} = -9V$$

$$18V_{pp}$$





$$+V_{sat} = 90\% (+V_{cc}) = 90\% (+5V) = 4.5V$$

$$-V_{sat} = 90\% (-V_{cc}) = 90\% (-5V) = -4.5V$$

$$A = \frac{R_3}{R_4} = \frac{2k\Omega}{1k\Omega} = 2 \quad \text{Senoidal}$$

$$F = \frac{1}{2\pi RC} = \frac{1}{2\pi \cdot 10k\Omega \cdot 10pF} = 1.59kHz$$

$$T = \frac{1}{F} = \frac{1}{1.59kHz} = 628.31\mu s$$

$$V_{sat} \rightarrow +V_{sat} = 4.5V \rightarrow 9V_{pp}$$

$$\rightarrow -V_{sat} = -4.5V$$

