A full-wave rectifier circuit is shown at right. The source
is a sinusoidal with a frequency of 60 Hz.

V_S ⊕ +
−

$10\ V_{RMS}$

$-\ v_R\ +$

$R\ \ 4.7k\Omega$
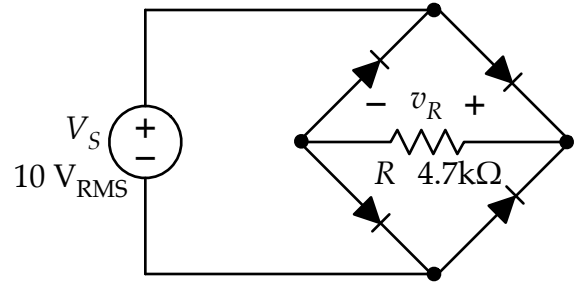
(a) What will be the peak value of the rectified voltage waveform?

$v_R(\text{peak}) =$ _____

b) If a capacitor is placed in parallel with the resistor to make a peak rectifier, what value should it have
in order to keep the ripple voltage to less than 5% of the peak of the peak value?

$C =$ _____

c) For the capacitor chosen in part (b), what will be the average voltage across the resistor?

$v_R(\text{average}) =$ _____

Write your answers — and whatever work will fit — on this sheet. Staple any sheets with additional work behind.