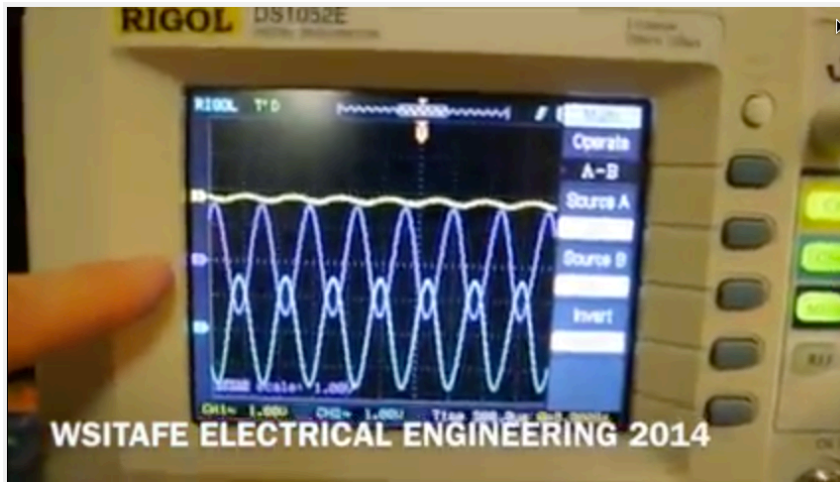


<https://youtu.be/jzvmHCV33XU>



Homework questions Part 2, RLC circuits.

Analyze the following RC circuits and draw a voltage-phasor diagram for each:

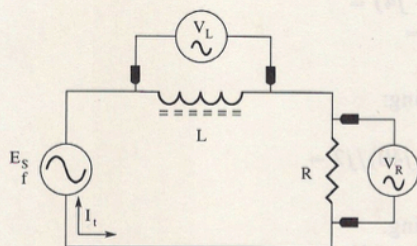
Fill in the blanks.

#	E_s	f	C	X_C	R	Z_t	I_t	V_R	V_C	$\angle\theta$
30.	$70\ \mu\text{V}$	15 MHz	28 pF		$100\ \Omega$					
31.	14 mV	90 kHz	$0.01\ \mu\text{F}$		$150\ \Omega$					
32.	10 V		$0.47\ \mu\text{F}$	$50\ \Omega$	$100\ \Omega$					
33.	30 mV	1.5 MHz		$300\ \Omega$	$100\ \Omega$					
34.	80 V		$0.001\ \mu\text{F}$	$1.48\ \text{k}\Omega$			50 mA			-68.2°

Draw the voltage phasor diagrams for each problem (5)

Use another sheet of paper and a ruler and scale.

Analyze the following RL circuits and draw a voltage-phasor diagram for each:

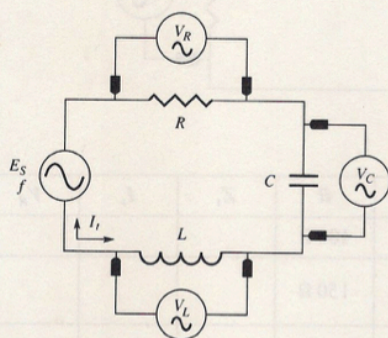


Fill in the blanks.

#	E_s	f	L	X_L	R	Z_t	I_t	V_R	V_L	$\angle\theta$
20.	8 V	400 Hz	100 mH		220 Ω					
21.	10 mV	1 kHz	1 H		1 k Ω					
22.	15 V	50 kHz		3.14 k Ω	2.7 k Ω					
23.	12 V		25 mH	10 k Ω	4.7 k Ω					
24.	115 V	60 Hz			1 k Ω					60°

Draw the voltage phasor diagrams for each problem (5)

Use another sheet of paper and a ruler and scale.



Fill in the blanks and draw the voltage phasor diagram for each problem.

#	E_s	f	R	C	L	X_C	X_L	Z_t	I_t	V_R	V_C	V_L	$\angle\theta$
43.	20 V	3 kHz	330 Ω	0.3 μF	50 mH								
44.	8 μV	45 kHz	10 k Ω	0.001 μF	10 mH								
45.		5 MHz							1 mA	30 mV	40 mV	50 mV	
46.		600 kHz	5.6 k Ω			12 k Ω	4 k Ω		25 mA				
47.				5 μF	0.5 H	200 Ω			100 mA	10 V			

Draw the voltage phasor diagrams for each problem (5) Use another sheet of paper and a ruler and scale.

