

f. 16 m

Unit 6E Standing Waves and Resonance Practice Problems

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Date:

W	ork each	of the following problems. SHOW ALL WORK.
1.	Draw the	first four harmonics of standing waves on a string.
2.	If the leng	gth of the string in question 1 is 2 meters, what are the wavelengths of the first four harmonics?
3.		ne possible wavelengths of standing waves on a string that is 4 meters long, and state which corresponds to the possible wavelengths.
	a. 1 m	
	b. 2 m	
	c. 4 m	
	d. 6 m	
	e. 8 m	



f. 6 m

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Work each of the following	a problems.	SHOW ALL	WORK.

W	rk each of the following problems. SHOW ALL WORK.
4.	Draw the first four harmonics of standing waves in an open-ended tube.
_	If the levels of the tube in greation A is 1 mater what are the wearlevalle at the first form because is 2
Э.	If the length of the tube in question 4 is 1 meter, what are the wavelengths of the first four harmonics?
6.	Choose the possible wavelengths of standing waves in an open-ended tube that is 3 meters long, and state
	which harmonic corresponds to the possible wavelengths.
	a. 1 m
	o. 1.5 m
	c. 2 m
	d. 3 m
	e. 5 m



e. 40 m

f. 60 m

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Date:

Work each of the following problems. SHOW ALL WORK.
7. Draw the first three harmonics of standing waves in a closed-ended tube (n= 1, 3, 5).
8. If the length of the tube in question 7 is 2 meters, what are the wavelengths of the first three harmonics?
9. Choose the possible wavelengths of standing waves in a closed-ended tube that is 15 meters long, and state
which harmonic corresponds to the possible wavelengths. a. 10 m
b. 12 m c. 20 m
d. 30 m