



PHYSLETS ANSWER SHEET

WS3A3

Waves / Set 3 / Animation 3

Name _____ Class _____

<Show all work on calculations. Include proper units. Explanations require complete sentences.>

- 1) In this animation the center of the white portion represents the top of a crest and the center of a black band represents the bottom of a trough. Start animation 1 and pause it to determine the wavelength of the waves.

- 2) Start animation 2. Locate position $X=0, Y=1$ right or left clicking on the screen. a) How does the distance from the point sources to this position compare to one another? b) What type of interference is occurring there?

- 3) Start animation 3. Locate position $X=1, Y=1$. Right /Left click on the screen to determine coordinates of the two point sources. a) Determine the distances between the sources and the position $x=1,y=1$. b) What is the wavelength difference between these two paths? c) What type of interference is occurring at that point?
 - a) distance from left point source to position $x=1,y=1$ _____ m
distance from right point source to position $x=1,y=1$ _____ m
 - b) _____ λ
 - c) _____ interference

- 4) If the point sources represent speakers on a stage and region in front of it a stage which animation would produce the greatest number of “dead spots” in which the music would be difficult to hear due to destructive interference?