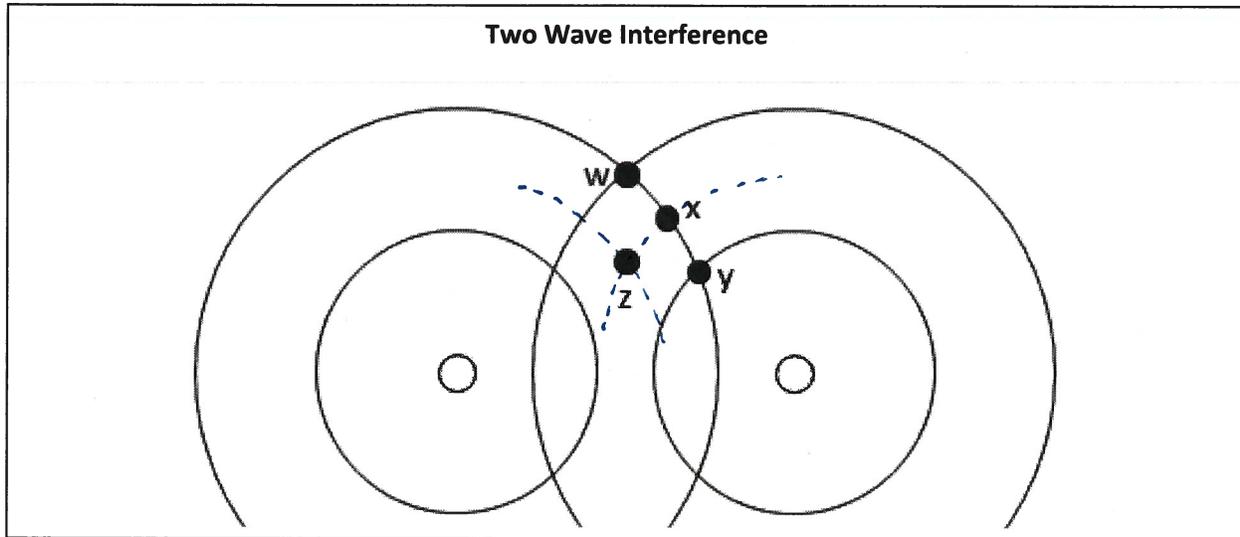


First Name: \_\_\_\_\_

Last Name: \_\_\_\_\_

## L04 - EQ - Wave Interference and Superposition

Use the following information to answer Q1:



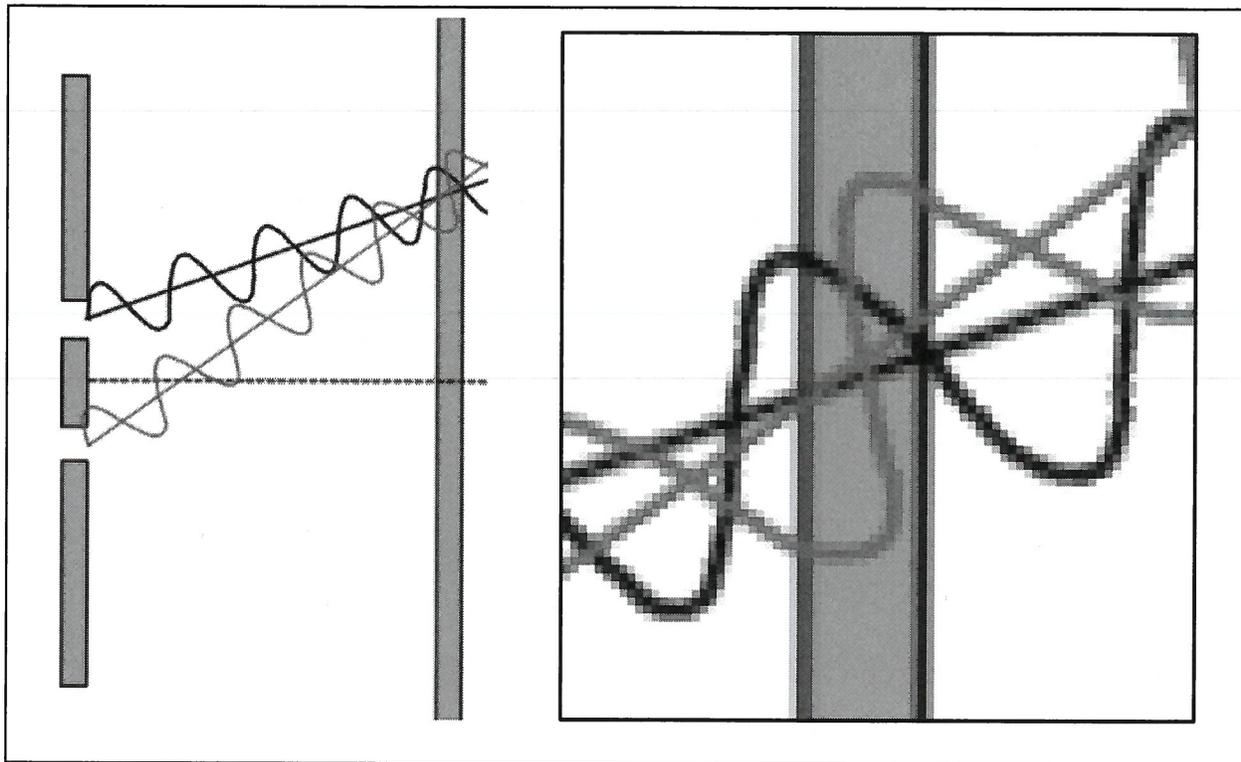
**Q1:** At what points will the waves interfere *constructively*?

- a. Points **w** and **y**
- b. Points **w**, **x**, and **y**
- c. Points **x** and **z**
- d. Points **w**, **y**, and **z**

**Q2:** Two waves interfere destructively. When the first wave is at a crest, the second wave

- a. Is at equilibrium
- b. Is at a crest
- c. Is at a trough
- d. There is not enough information given to be able to answer this question.

Use the following information to answer Q3:



Q3: A light source is propagated through a double slit, as diagrammed above. Write two statements describing what occurs when they meet on the screen.

- Top wave is at a crest, bottom wave is at a trough.
- ① Interact destructively.
  - ② Will create a dark spot.

**MARKING:**

Beginning	0 – 1.5
Progressing	2 – 2.5
Competent	3 – 3.5
Exemplary	4