**Unit 5 – Waves: Quiz 2b**

/5

1. Monochromatic light from a single slit illuminates two, narrow parallel slits. The centres of the two slits are 0.800 mm apart. An interference pattern forms on a screen 50.0 cm away. The fringe separation on the screen is 0.304 mm. Find the wavelength λ of the light.



*Use the image above to answer the next two questions:*

1. Which fringe is the third order maximum?

A, B, C, D, or E

1. Which one of the following phenomena would be observed if the distance between the slits were increased?
	1. *The fringes would become brighter.*
	2. *The central bright fringe would change position.*
	3. *The separation between the dark fringes would decrease.*
	4. *The distance between dark fringes would increase.*
	5. *The distance between bright fringes would increase.*

Answers:

1. Monochromatic light from a single slit illuminates two, narrow parallel slits. The centres of the two slits are 0.800 mm apart. An interference pattern forms on a screen 50.0 cm away. The fringe separation on the screen is 0.304 mm. Find the wavelength λ of the light.



 

1. Which fringe is the third order maximum?

A, B, C, D, or E

1. Which one of the following phenomena would be observed if the distance between the slits were increased?
2. *The fringes would become brighter.*
3. *The central bright fringe would change position.*
4. *The separation between the dark fringes would decrease.*
5. *The distance between dark fringes would increase.*
6. *The distance between bright fringes would increase.*