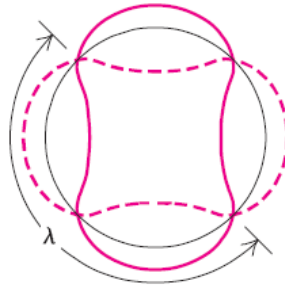
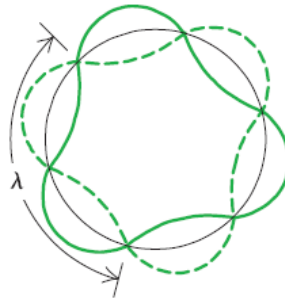


- 1861 - Maxwell's Equations
- 1885 - Balmer finds formula for visible Hydrogen spectral lines.
- 1895 - Röntgen produces bremsstrahlung x-rays.
- 1897 - JJ Thomson experiment for  $e/m$
- 1900 - Planck radiation law
- 1905 - Photo-electric effect explained by Einstein.
- 1909 - Millikan oil drop
- 1910 - Rutherford Scattering
- 1913 - Bohr Model
- 1914 - Franck-Hertz experiment
- 1923 - Compton scattering
  
- 1924 - de Broglie waves
- 1926 - Schrödinger equation
- 1927 - Davisson-Germer electron diffraction

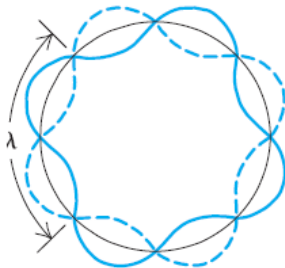
**39.2** Diagrams showing the idea of fitting a standing wave around a circular orbit. For the wave to join onto itself smoothly, the circumference of the orbit must be an integral number  $n$  of wavelengths. Examples are shown for  $n = 2$ ,  $n = 3$ , and  $n = 4$ .



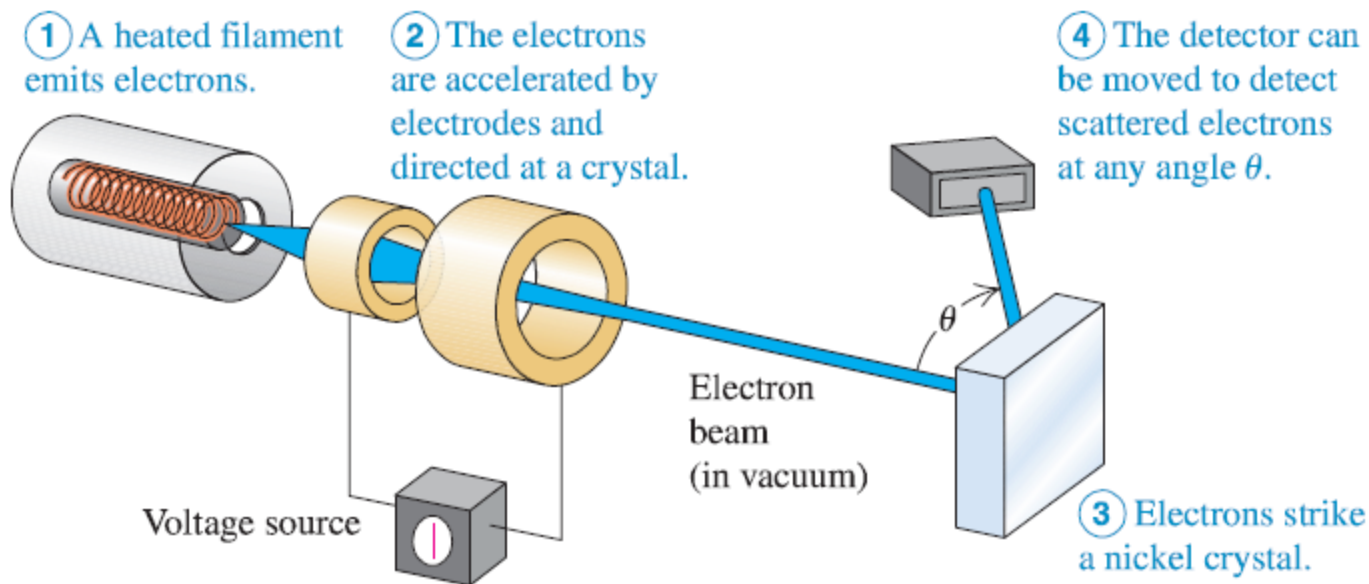
$n = 2$



$n = 3$



$n = 4$



In the electron diffraction experiment, if we increase the voltage by which the electrons are accelerated:

- a) The diffraction pattern features will get larger.
- b) The diffraction pattern features will get smaller.
- c) The diffraction pattern features will stay the same.

