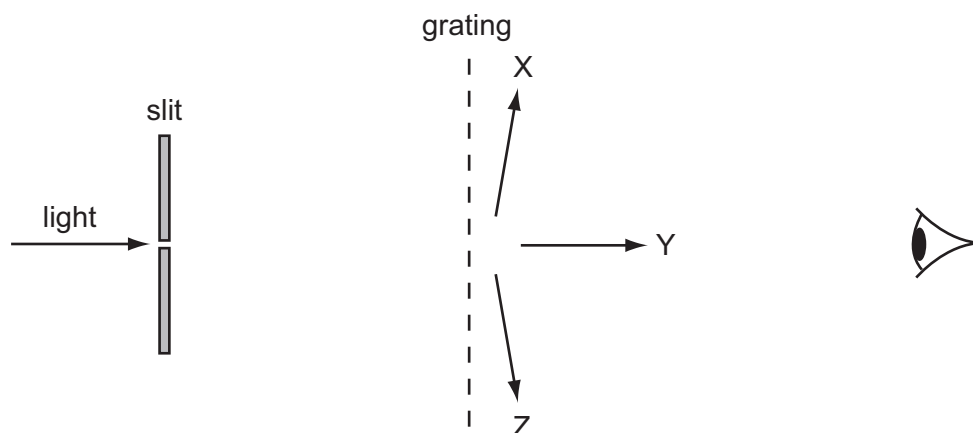


**27** A diffraction grating with 500 lines per mm is used to observe diffraction of monochromatic light of wavelength 600 nm.

The light is passed through a narrow slit and the grating is placed so that its lines are parallel to the slit. Light passes through the slit and then the grating.



An observer views the slit through the grating at different angles, moving his head from X parallel to the grating, through Y, opposite the slit, to Z parallel to the grating on the opposite side.

How many images of the slit does he see?

**A** 3

**B** 4

**C** 6

**D** 7

**Space for working**