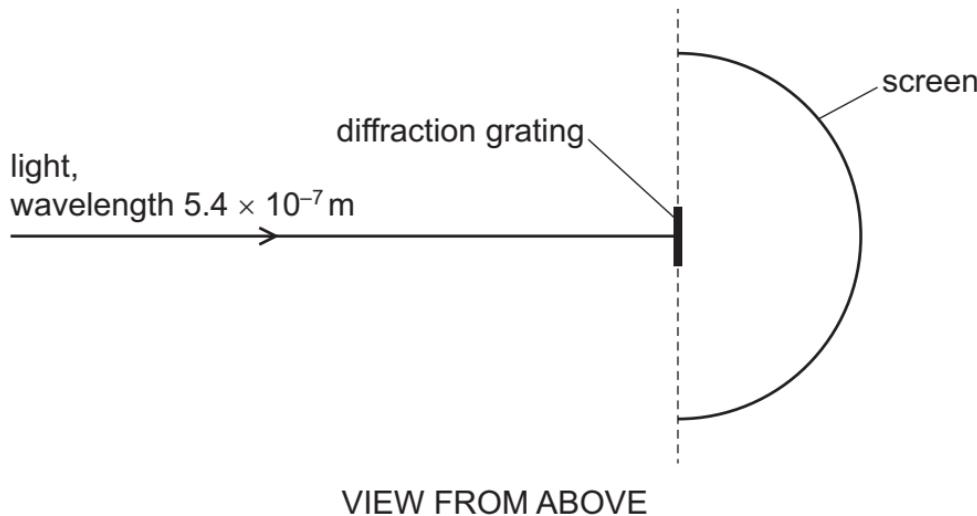


- 30** Light of wavelength  $5.4 \times 10^{-7}$  m is incident normally on a diffraction grating.

The separation between adjacent lines in the grating is  $2.0 \times 10^{-6}$  m. The light that emerges from the grating falls on a semicircular screen, as shown in the view from above.



The grating is at the centre of the semicircle, and the lines of the grating are vertical.

How many bright dots are formed on the screen?

**A** 3

**B** 4

**C** 6

**D** 7