

- 13** Two monochromatic radiations X and Y of wavelengths λ_X and λ_Y respectively, are incident normally on a diffraction grating. The third order intensity maximum for X coincides with the fifth order intensity maximum for Y.

What is the ratio of $\frac{\lambda_X}{\lambda_Y}$?

A $\frac{1}{2}$

B $\frac{3}{5}$

C $\frac{5}{3}$

D Not able to determine with given information.

- 14** Which statement is true for an ideal gas undergoing compression in an insulated container?