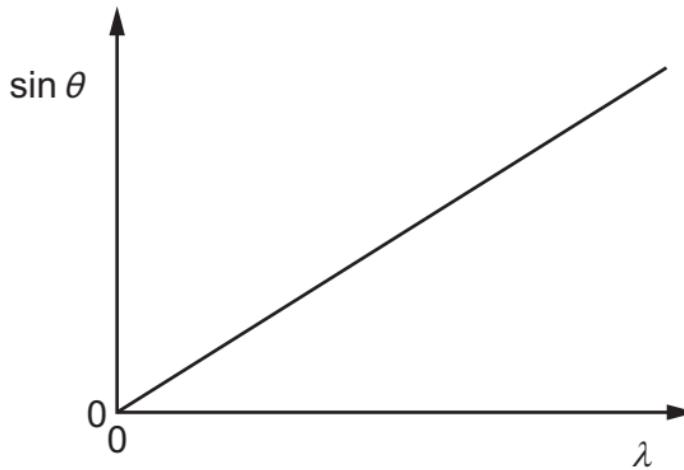


27 A diffraction grating with  $N$  lines per metre is used to deflect light of various wavelengths  $\lambda$ .

The graph shows a relation between the deflection angle  $\theta$  and  $\lambda$  for different wavelengths in the  $n^{\text{th}}$  order interference pattern.



What is the gradient of the graph?

A  $Nn$

B  $\frac{N}{n}$

C  $\frac{n}{N}$

D  $\frac{1}{Nn}$

28 Which wave phenomenon is not needed to explain the pattern of observable fringes produced by