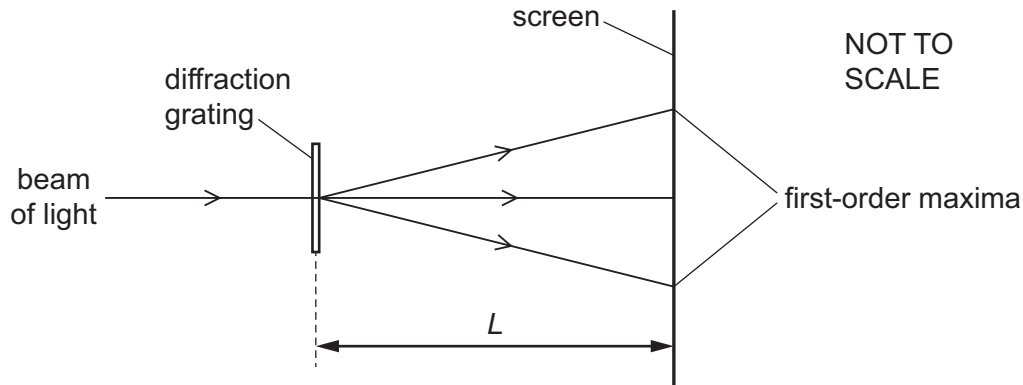


- 29** The diagram shows a screen that is a distance  $L$  from a diffraction grating. The grating has a total number of  $N$  lines. Any two adjacent lines are a distance  $d$  apart. A beam of parallel light of wavelength  $\lambda$  is incident normally on the grating.



Which quantities affect the distance between the first-order diffraction maxima on the screen?

	$d$	$\lambda$	$L$	$N$
<b>A</b>	✓	✓	✓	x
<b>B</b>	✓	✓	x	x
<b>C</b>	✓	x	✓	✓
<b>D</b>	x	✓	x	✓

key

✓ = affects the distance

x = does not affect the distance