27. Bright interference fringes occur at angles θ given by $d \sin\theta = m\lambda$, where m is an integer. For the slits of this problem, $d = 11a/2$, so $a \sin\theta = 2m\lambda/11$ (see Sample Problem 37-4). The first minimum of the diffraction pattern occurs at the angle θ_1 given by $a \sin\theta_1 = \lambda$, and the second occurs at the angle θ_2 given by $a \sin\theta_2 = 2\lambda$, where a is the slit width. We should count the values of m for which $\theta_1 < \theta < \theta_2$, or, equivalently, the values of m for which $\sin\theta_1 < \sin\theta < \sin\theta_2$. This means $1 < (2m/11) < 2$. The values are $m = 6$, 7, 8, 9, and 10. There are five bright fringes in all.