

16. (a) Referring to Tables 45-3 and 45-4, we find the strangeness of  $K^0$  is  $+1$ , while it is zero for both  $\pi^+$  and  $\pi^-$ . Consequently, strangeness is not conserved in this decay;  $K^0 \rightarrow \pi^+ + \pi^-$  does not proceed via the strong interaction.
- (b) The strangeness of each side is  $-1$ , which implies that the decay is governed by the strong interaction.
- (c) The strangeness of  $\Lambda^0$  is  $-1$  while that of  $p + \pi^-$  is zero, so the decay is not via the strong interaction.
- (d) The strangeness of each side is  $-1$ ; it proceeds via the strong interaction.