

HW 15-8 Soln

The text says these are baryons, so $B = +1$. If it's actually -1 , then we're finding its anti-particle.

$I_Z = 0$ and $Y = -2$. Then,

$$Y = B + S, \text{ so } S = Y - B = -2 - 1 = -3 \quad *$$

$$I_Z = Q - Y/2, \text{ so } Q = I_Z + Y/2 = 0 + -2/2 = -1$$

$$B = 1; S = -3; Q = -1$$

This is now known as the Ω^- particle.

*and so necessarily, this particle is composed of three strange quarks.