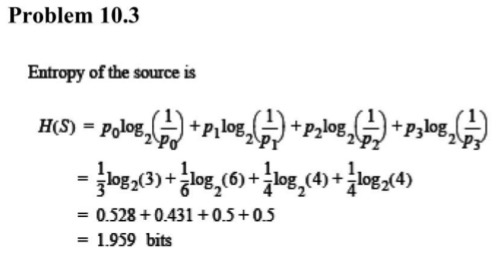
**Communication Systems**

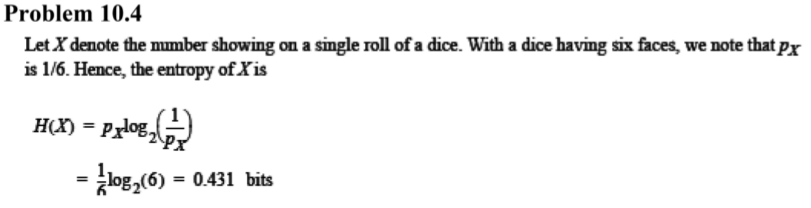
**2018**–Ch10 exercises solution

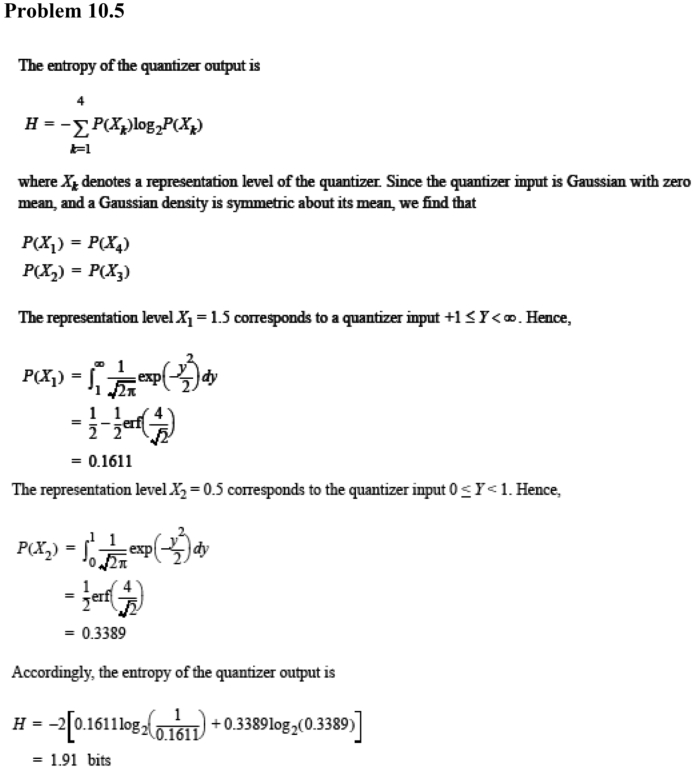
**Problem 10.3**

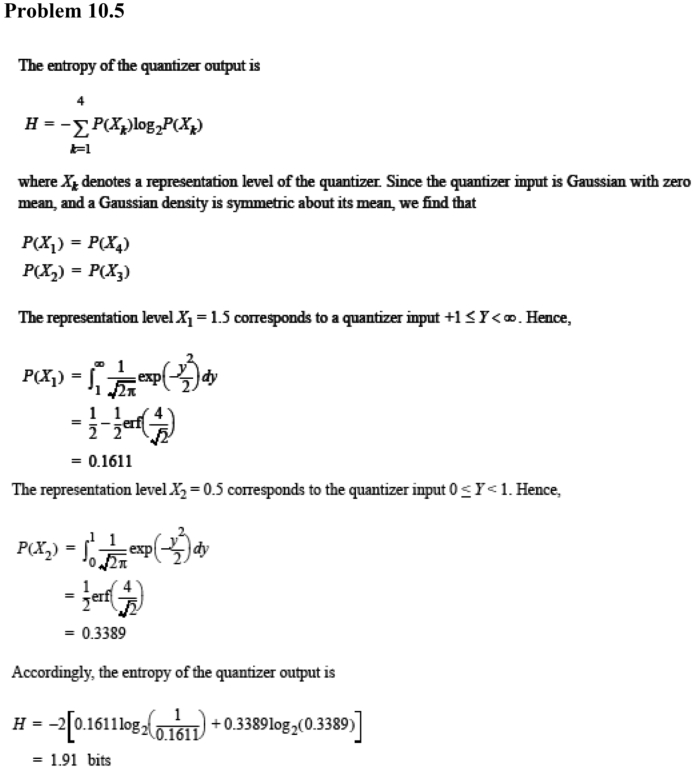
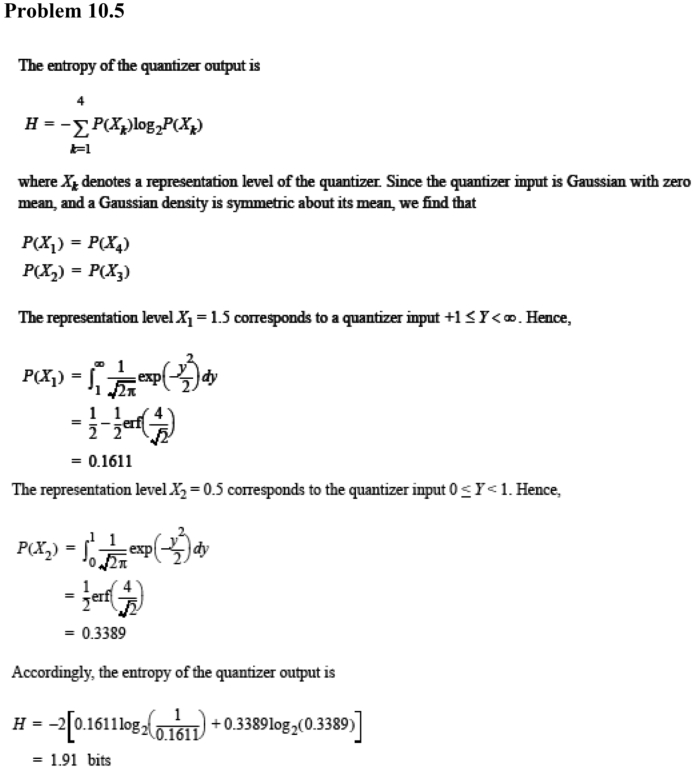
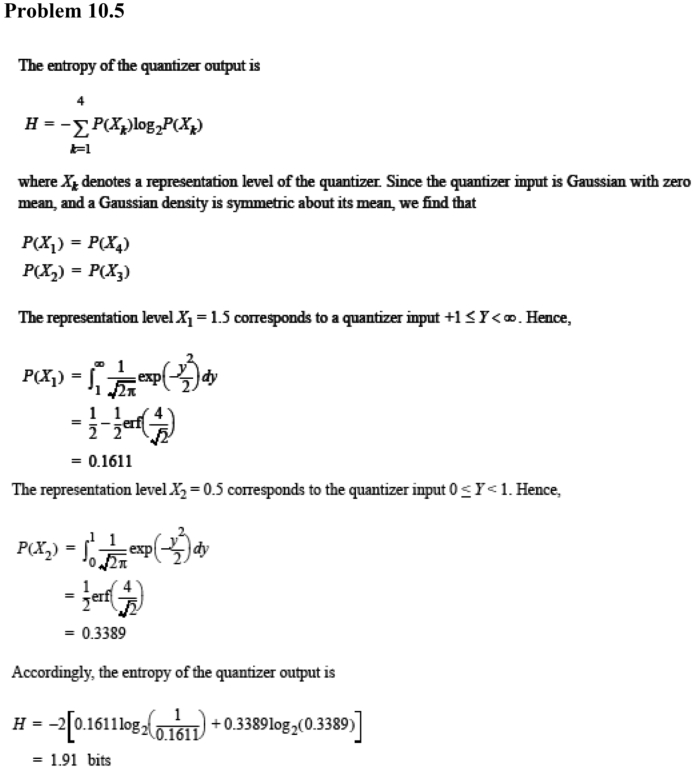


**Problem 10.4**

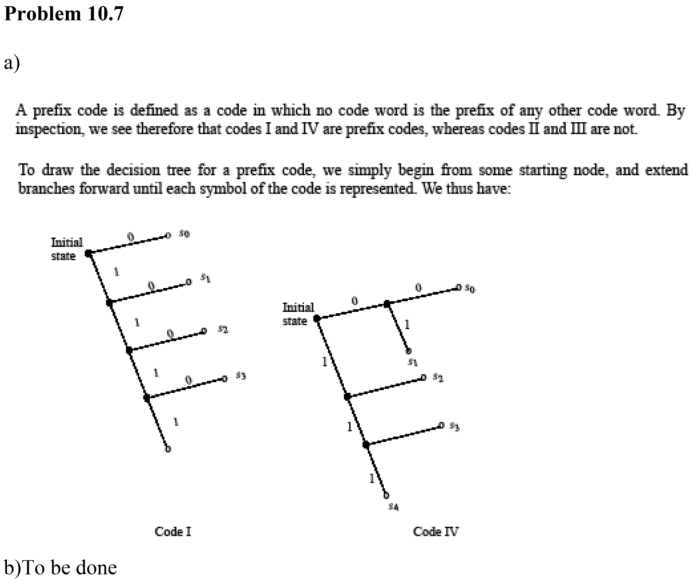
Let *X* denote the number showing on a single roll of a dice. With a dice having six faces, we note the is . Hence, the entropy of *X* is



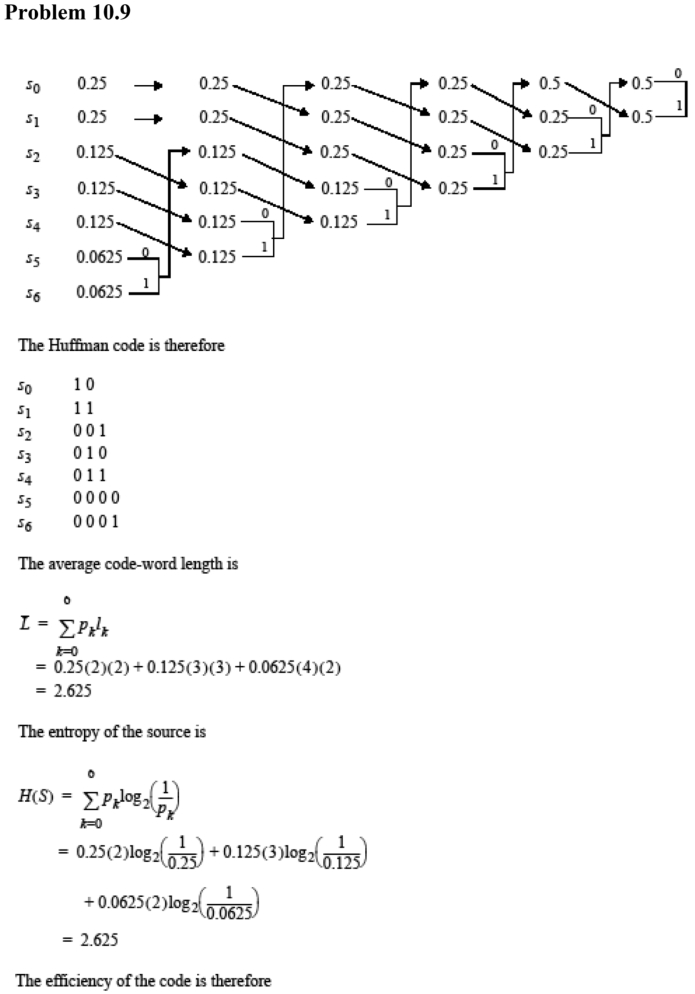
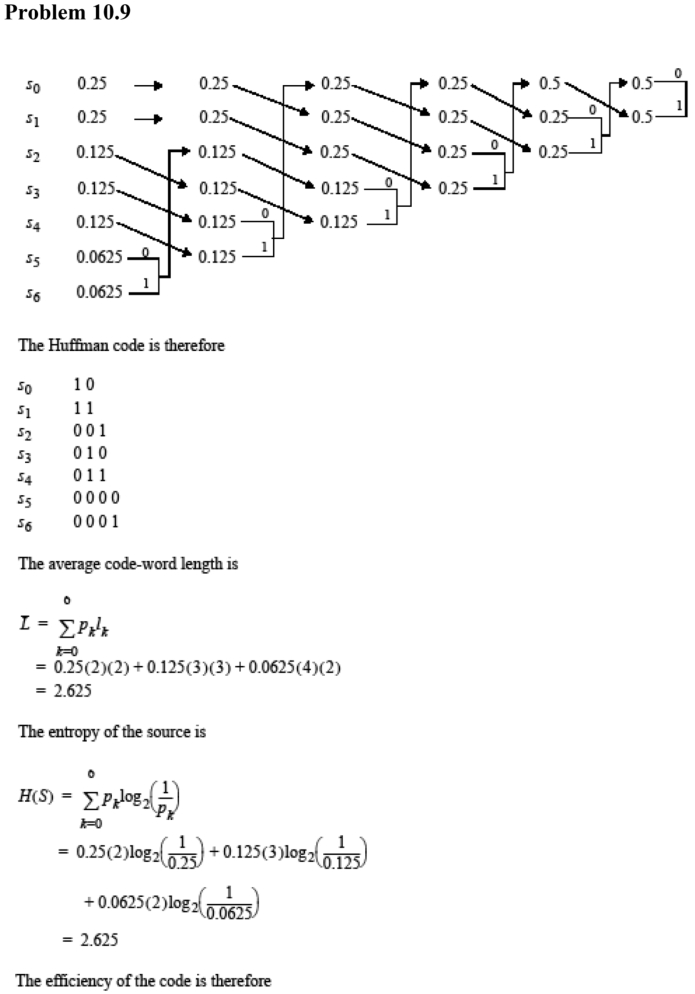
**Problem 10.5**

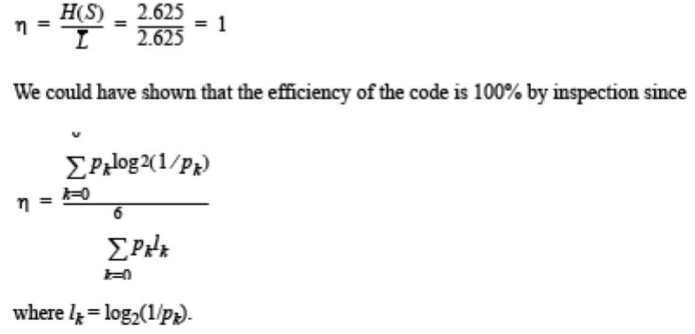


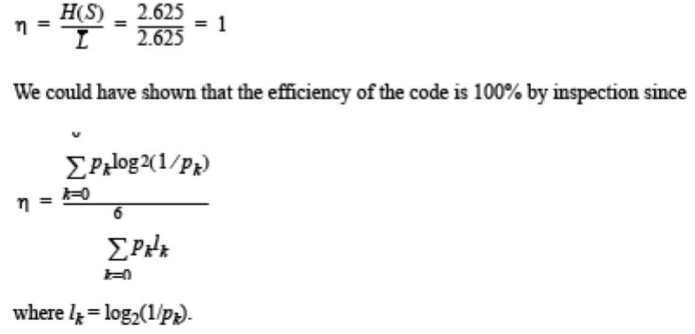
**Problem 10.7**



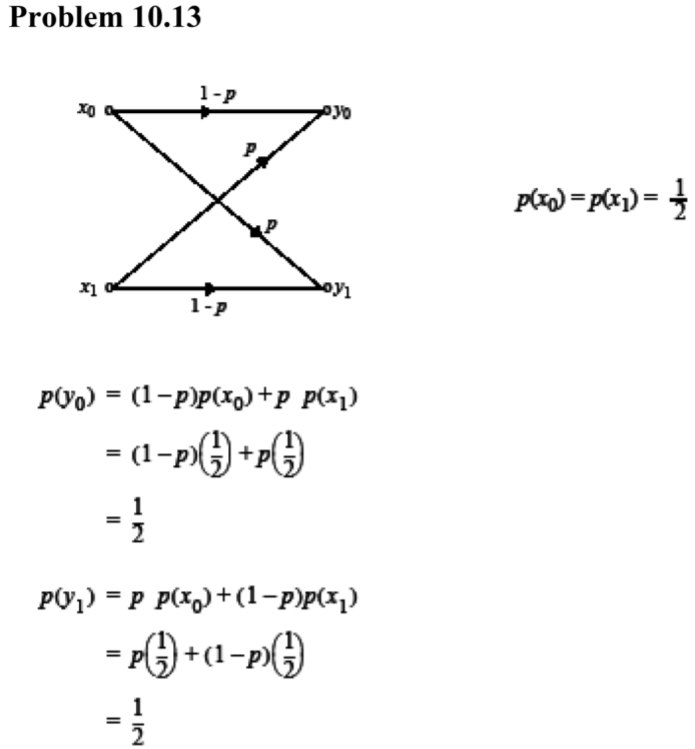
**Problem 10.9**



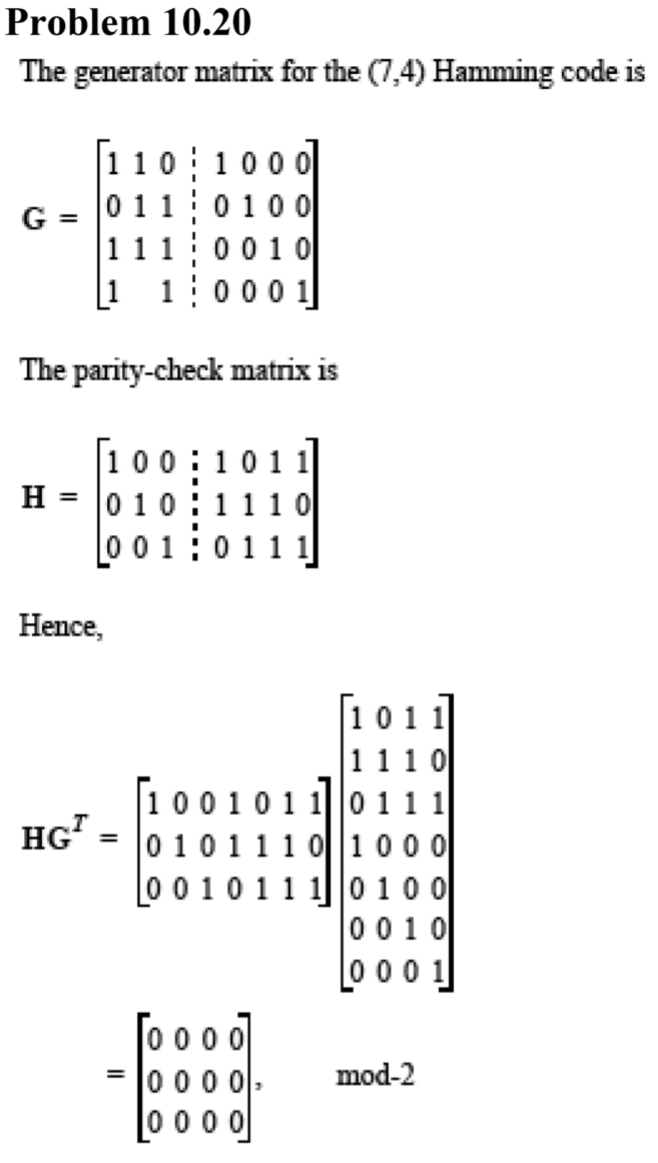
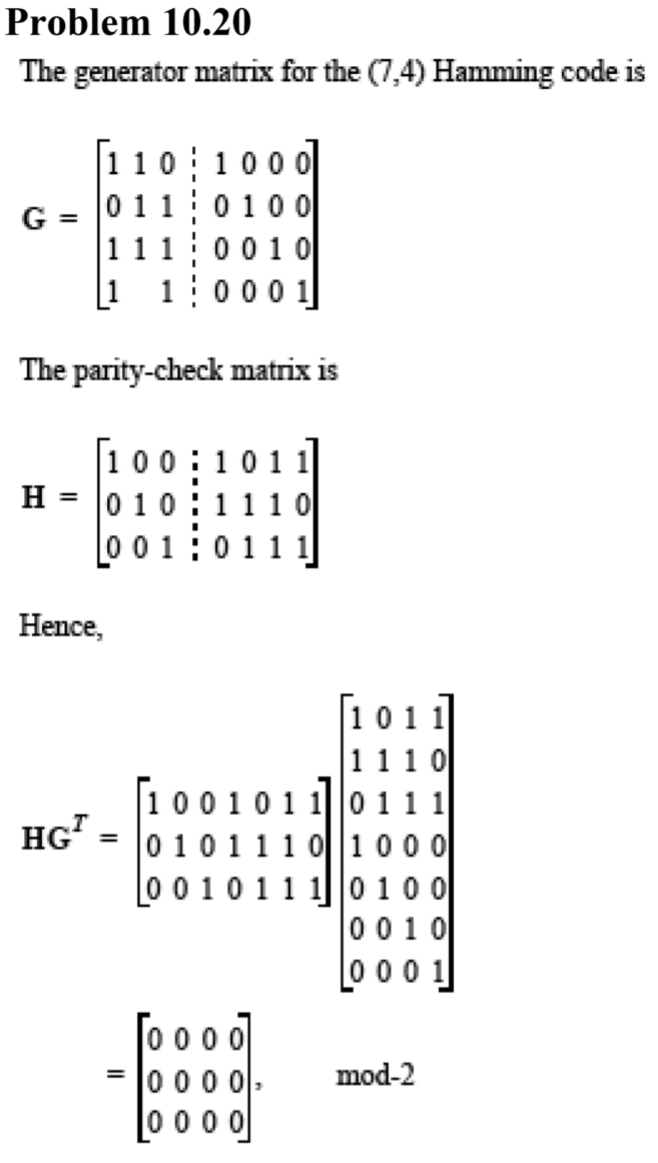




**Problem 10.13**



**Problem 10.20**



**Problem 10.21**

