Source words	Probability	Code word	(Length) • (	Probabilit
$X_1$	0.2500	00	2 (0.25)	= 0.50
$X_2$	0.2500	01	2 (0.25)	= 0.50
-		A A'		
$X_3$	0.1250	100	3 (0.125)	= 0.375
$X_4$	0.1250	101	3 (0.125)	= 0.375
$X_5$	0.0625	1100	4 (0.0625)	= 0.25
$X_6$	0.0625	1101	4 (0.0625)	= 0.25
$X_7$	0.0625	1110	4 (0.0625)	= 0.25
$X_8$	0.0625	1111	4 (0.0625)	= 0.25
		Average word length = $2.75$		

