Automata and formal languages

Answer the following questions and submit your report by next time.

1. **For $\Sigma = \{0, 1\}$, construct an NFA accepting the following language: the set of all strings such that some two 0's are separated by a string whose length is $4i$, for some $i \geq 0$**

2. **Construct two DFA's equivalent to the NFA's**

   (a) $M_1 = (\{p, q, r, s\}, \{0, 1\}, \delta_1, p, \{s\})$

   (b) $M_2 = (\{p, q, r, s\}, \{0, 1\}, \delta_2, p, \{q, s\})$

   where δ_1 and δ_2 are given by the following tables

	0	1
p	{p, q}	{p}
q	{r}	{r}
r	{s}	-
s	{s}	{s}

δ_1

	0	1
p	{q, s}	{q}
q	{r}	{q, r}
r	{s}	{p}
s	-	{p}

δ_2