Exercise 1

$d = 2321638369$
$m = 236778214$

Exercise 2

The adversary can query the challenger with c^{*2}. The decrypted response will be equal to the plaintext squared. The adversary can then trivially compare it to $m_0{}^2$ and $m_1{}^2$ in order to determine b.

Since we know that

$$(a \cdot b)^c = a^c \cdot b^c$$

we can apply it to our RSA decryption:

$$(c^* \cdot c^*)^d = c^{*d} \cdot c^{*d}$$

Since we know that c^{*d} is either m_0 or m_1, we can determine the value of the randomly chosen bit b from the response like this:

$$b = \begin{cases} 0, & Dec(c^{*2}, sk) = m_0{}^2 \\ 1, & Dec(c^{*2}, sk) = m_1{}^2 \end{cases}$$