Q55. A check digit for a 4-digit number $X_1X_2X_3X_4$ can be calculated as follows:

$$\text{mod}((X_1\times4+X_2\times3+X_3\times2+X_4\times1),\ 10)$$

When the check digit for the 4-digit number "$7X_242$" is equal to 6, which of the following is the correct number to be put in X_2?   Here, mod (a,b) returns the remainder after "a" is divided by "b."

a) 5   b) 6   c) 7   d) 8