QUESTION specific observations :

Q1.b – the 1 hidden layer with 50 neurons is successful in approximating the sine function

Q1.c- fewer than 50 neurons can approximate the sine function less precisely(underfitting)

More neurons, same accuracy, more training time.

Q1.d – Sigmoid (instead of RELU takes more time to converge) & requires a higher number of epochs to get similar level of approximation

Q1.e f(x) = x^3 requires a more complex network (250-500 neurons instead of 50 as required for sine) . Varying the no. of neurons – got the same observation as those written above for Q1.c & Q1.d