1. Ex. 7.2.

Auto-Encoder work by learning to encode the input data into a lower-dimensional representation and then reconstructing the original input from this representation.

Since the rows of zeros around the edges are common across most digits and do not contribute much to the content of the digit itself, the encoder may learn to ignore or downplay these areas in its encoding process.

As a result, the weights in the last layer

before the output of the encoder may be influenced by this tendency to ignore or downplay the rows of zeros around the edges, causing lower importance being assigned to these areas.

2. Ex. 7.6

① the code is : real=np.random.normal(5, 0.5, (bSz,1))

② The GAN model described in the code doesn't directly optimize for matching the standard deviation of the real data. Instead, it focuses on generating samples that are realistic enough to deceive the discriminator. As a result, the standard deviation of the generated data may differ from that of the real data.