PW-12

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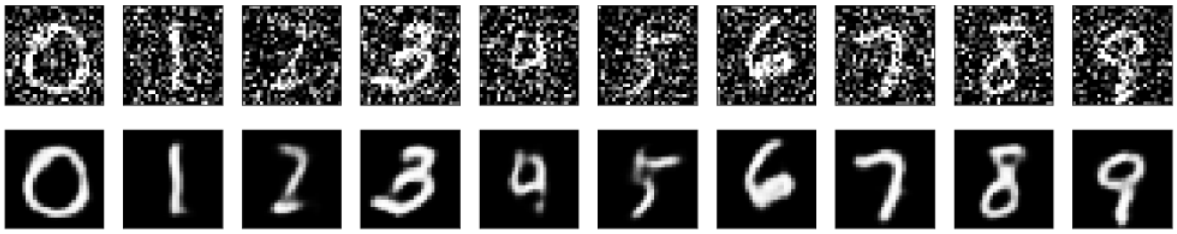
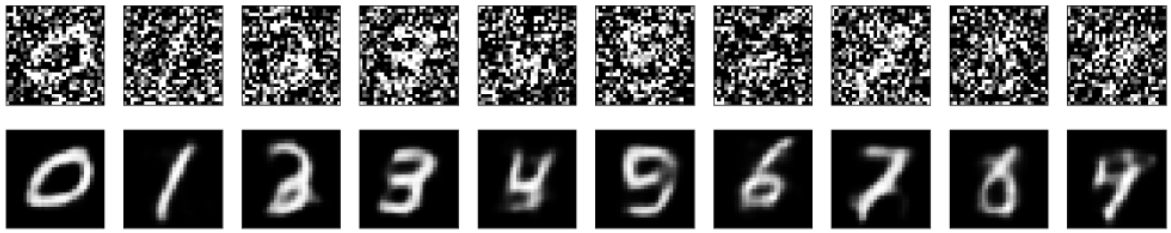
Question 2

Noise of 0.5



Noise of 0.7

Noise of 0.9

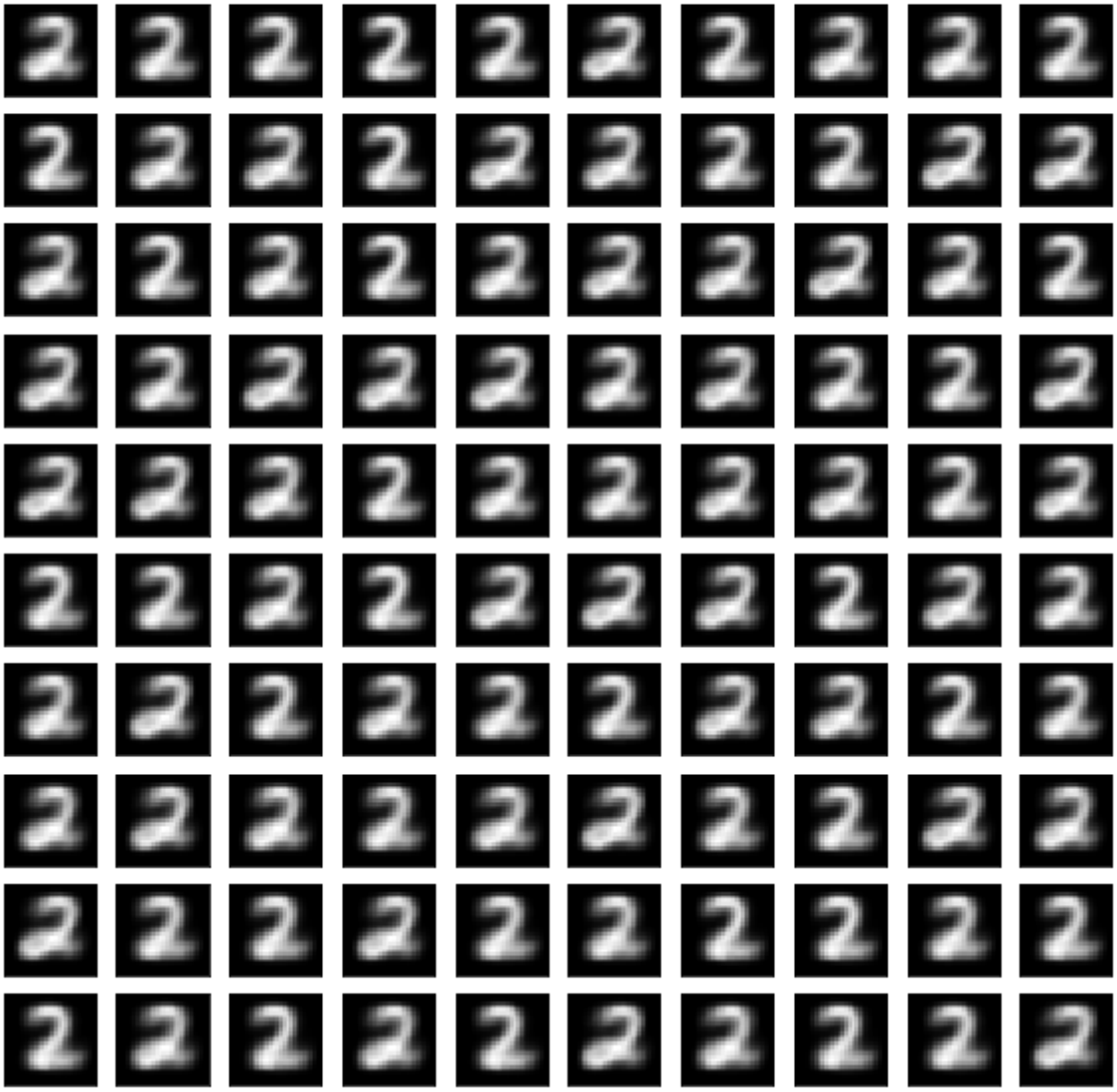


Question 3

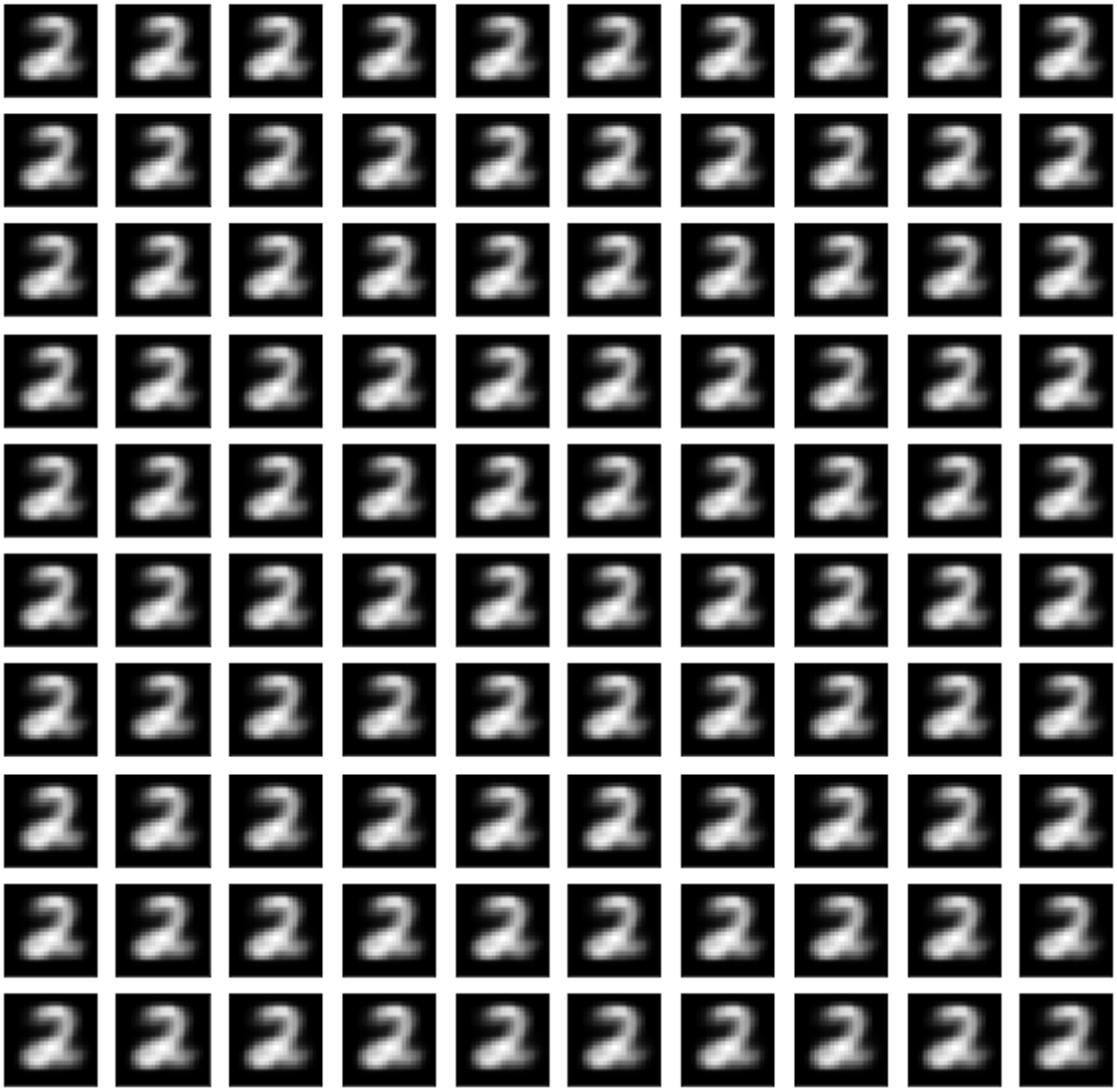
We can see that the model becomes really good at denoising. It is difficult for the human eye de know what number is hiding behind behind a noise of 0.9, but the model is able to determine it.

Question 4

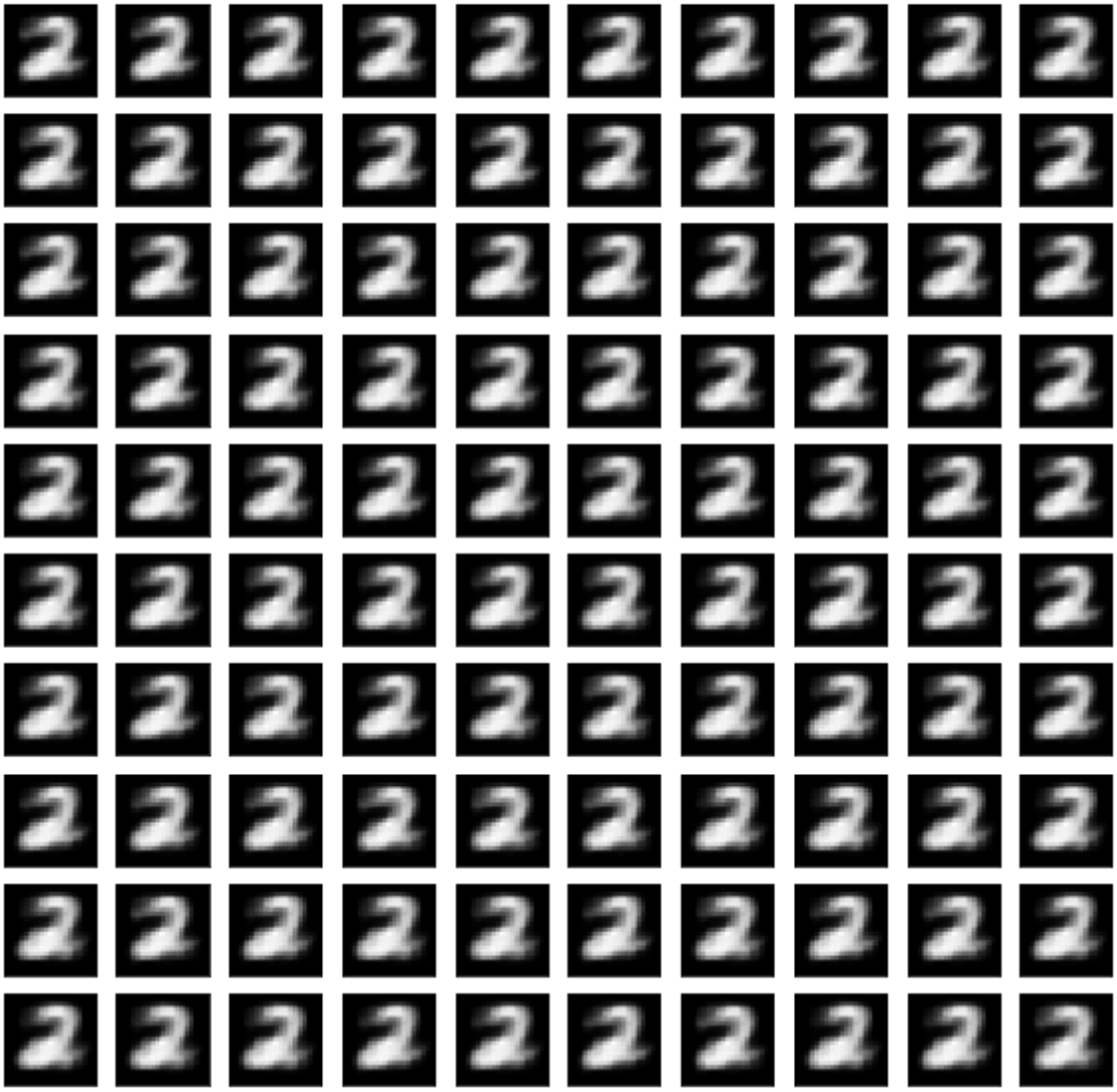
Predictions with size 5958

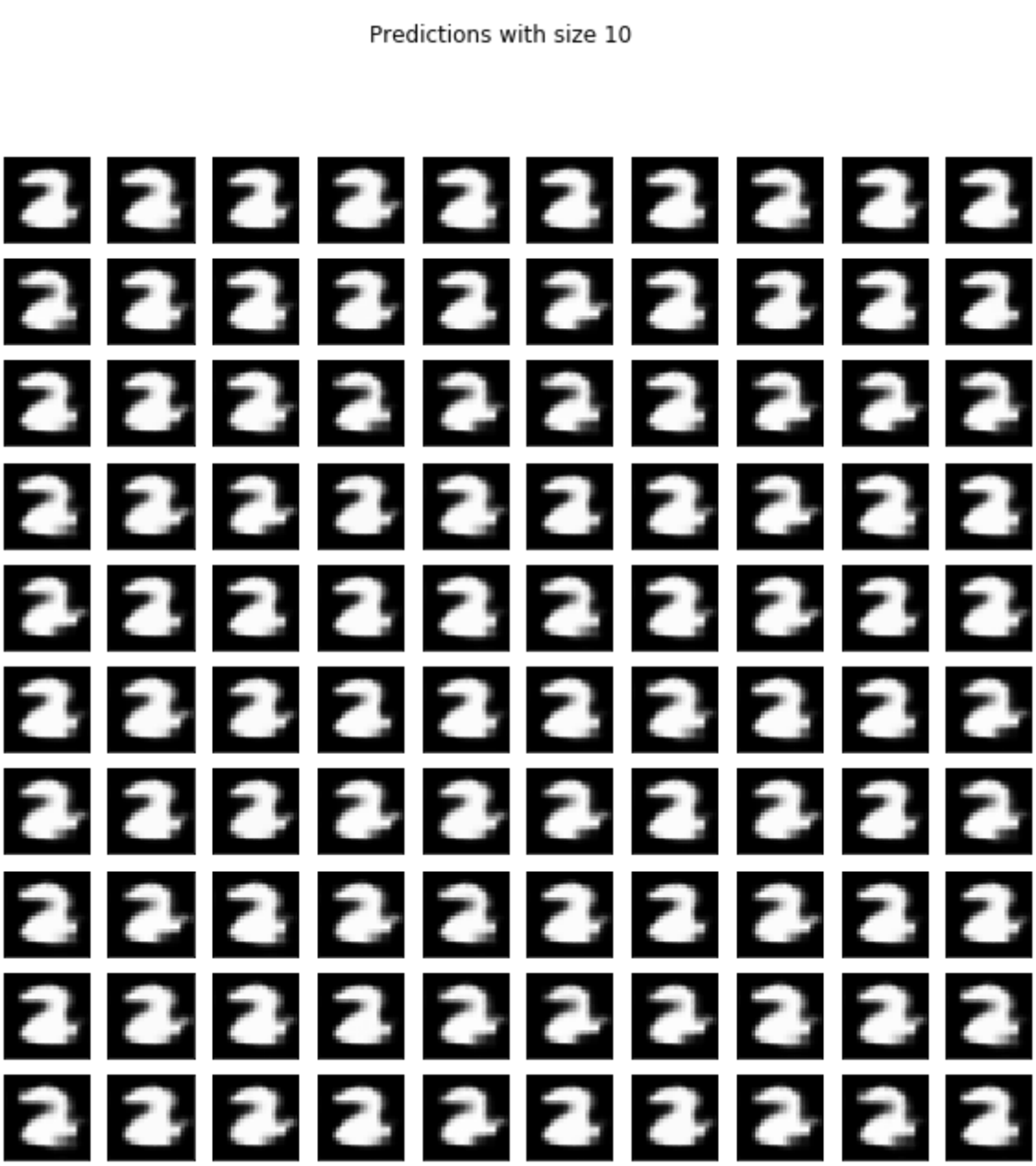


Predictions with size 1000



Predictions with size 100

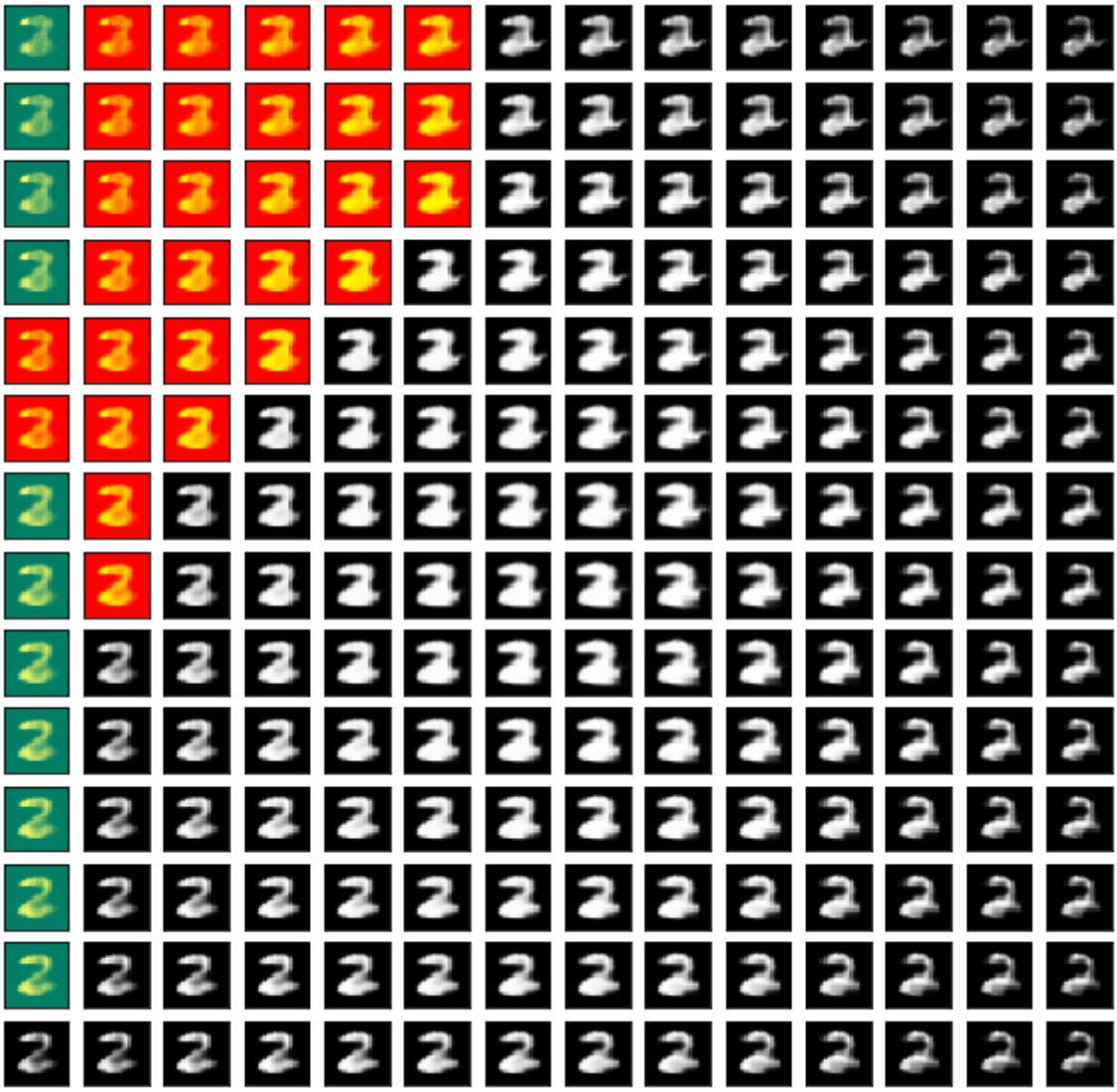




We can see that the more samples we take, the blurrier the images generated are, but with 10 samples, it is quite difficult to say that the generated number is 2 (kind of look like an 'a').

It would be possible to measure the diversity by calculating the average difference between the elements.

Question 5



We can see that for the generation of 2 with only 10 samples, some 2 are classified as '3' (green) or '4' (red).

Similarly for the predictions of 8, we can see that multiples 8 are classified as '3', some as '1' (yellow) and one has been classified as '5' (the blue one).