

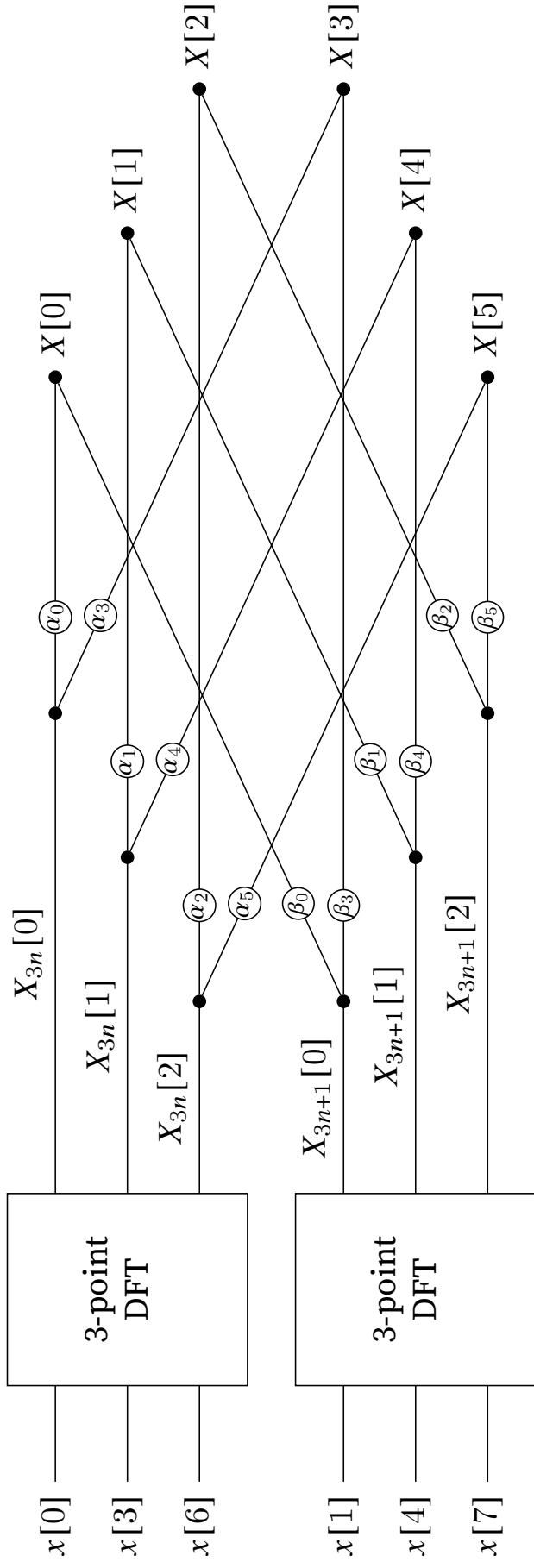
FFT exploration

ECE466: Digital Signal Processing

Task

In this exercise, you will compute a 6-point Fast Fourier Transform (FFT). First, you will watch the first part of the lecture on the FFT. Then, you will be asked to compute weights for the 6-point FFT, the diagram is printed in the next page. You will have 15 minutes to complete the exercise. Afterwards, you will watch the second part of the lecture on the FFT and attempt to compute the 6-point FFT again. Should you choose to participate in this activity, you will be awarded 10 points as a reward, otherwise, you will be assigned an alternative MATLAB-based assignment worth 10 points.

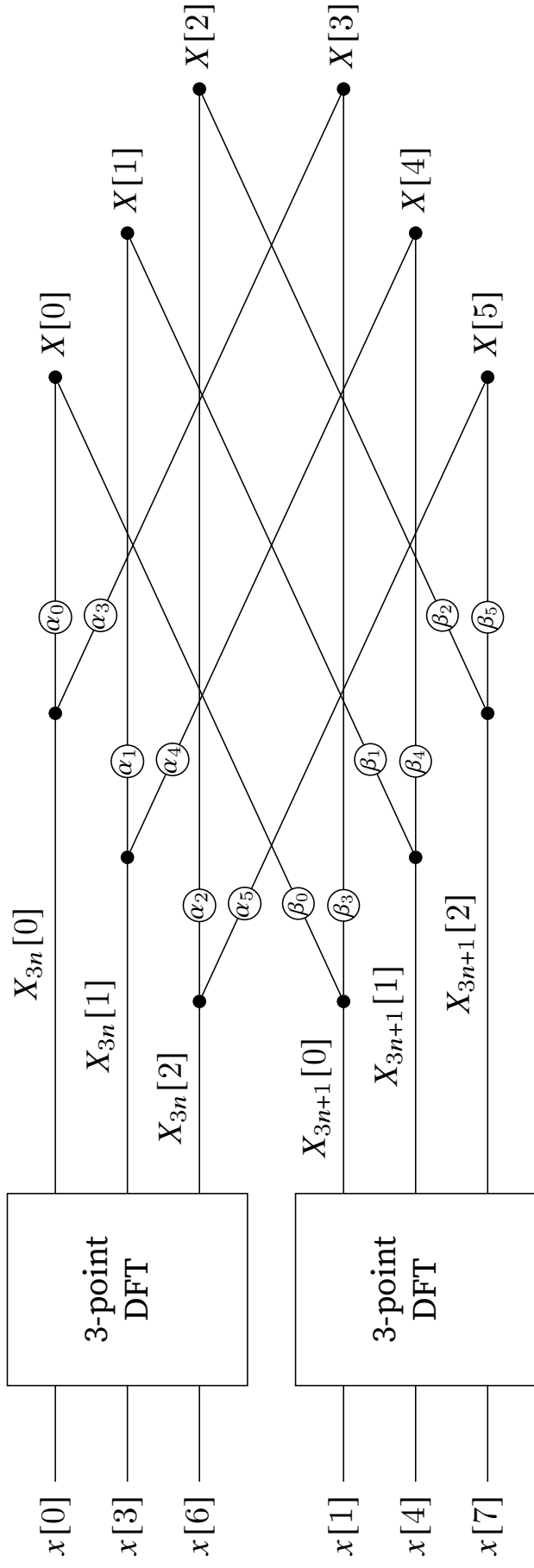
The space below is intentionally left blank to accommodate work that wouldn't fit elsewhere and/or scratch work.



$\alpha_0 =$ _____ $\alpha_3 =$ _____ $\beta_0 =$ _____ $\beta_3 =$ _____

$\alpha_1 =$ _____ $\alpha_4 =$ _____ $\beta_1 =$ _____ $\beta_4 =$ _____

$\alpha_2 =$ _____ $\alpha_5 =$ _____ $\beta_2 =$ _____ $\beta_5 =$ _____



$$\alpha'_0 = \underline{\hspace{2cm}} \quad \alpha'_3 = \underline{\hspace{2cm}} \quad \beta'_0 = \underline{\hspace{2cm}} \quad \beta'_3 = \underline{\hspace{2cm}}$$

$$\alpha'_1 = \underline{\hspace{2cm}} \quad \alpha'_4 = \underline{\hspace{2cm}} \quad \beta'_1 = \underline{\hspace{2cm}} \quad \beta'_4 = \underline{\hspace{2cm}}$$

$$\alpha'_2 = \underline{\hspace{2cm}} \quad \alpha'_5 = \underline{\hspace{2cm}} \quad \beta'_2 = \underline{\hspace{2cm}} \quad \beta'_5 = \underline{\hspace{2cm}}$$