1. Show that for $a \in \mathbb{R}$ and $t > 0$, the following functions belong to the class $\mathcal{F}$:

(a) $f(x) = e^{-\pi t (x+a)^2}$,

(b) $f(x) = \dfrac{e^{-2\pi i a x}}{\cosh(\pi \frac{x}{t})}$.

2. Exercise 2 of Chapter 4 of the Textbook.

3. Exercise 4 of Chapter 4 of the Textbook.

4. Exercise 6 of Chapter 4 of the Textbook.

5. Exercise 9 of Chapter 4 of the Textbook.

(End)