reconstruction summary

$$x[n] \longrightarrow \boxed{\text{D/A}} \longrightarrow y(t)$$

$$x[n], \; X(f) \longrightarrow \boxed{\begin{array}{c}\text{sequence to}\\\text{impulse train}\end{array}} \xrightarrow{\; w(t), \; W(F) \;} \boxed{\begin{array}{c}\text{low pass filter}\\ h(t) \leftrightarrow H(F)\end{array}} \xrightarrow{\; y(t), \; Y(F)}$$
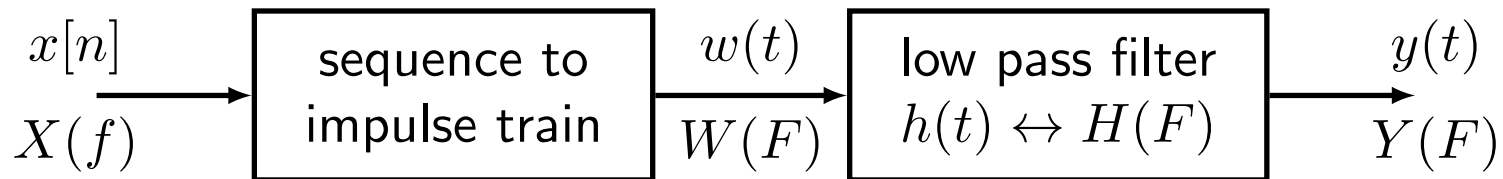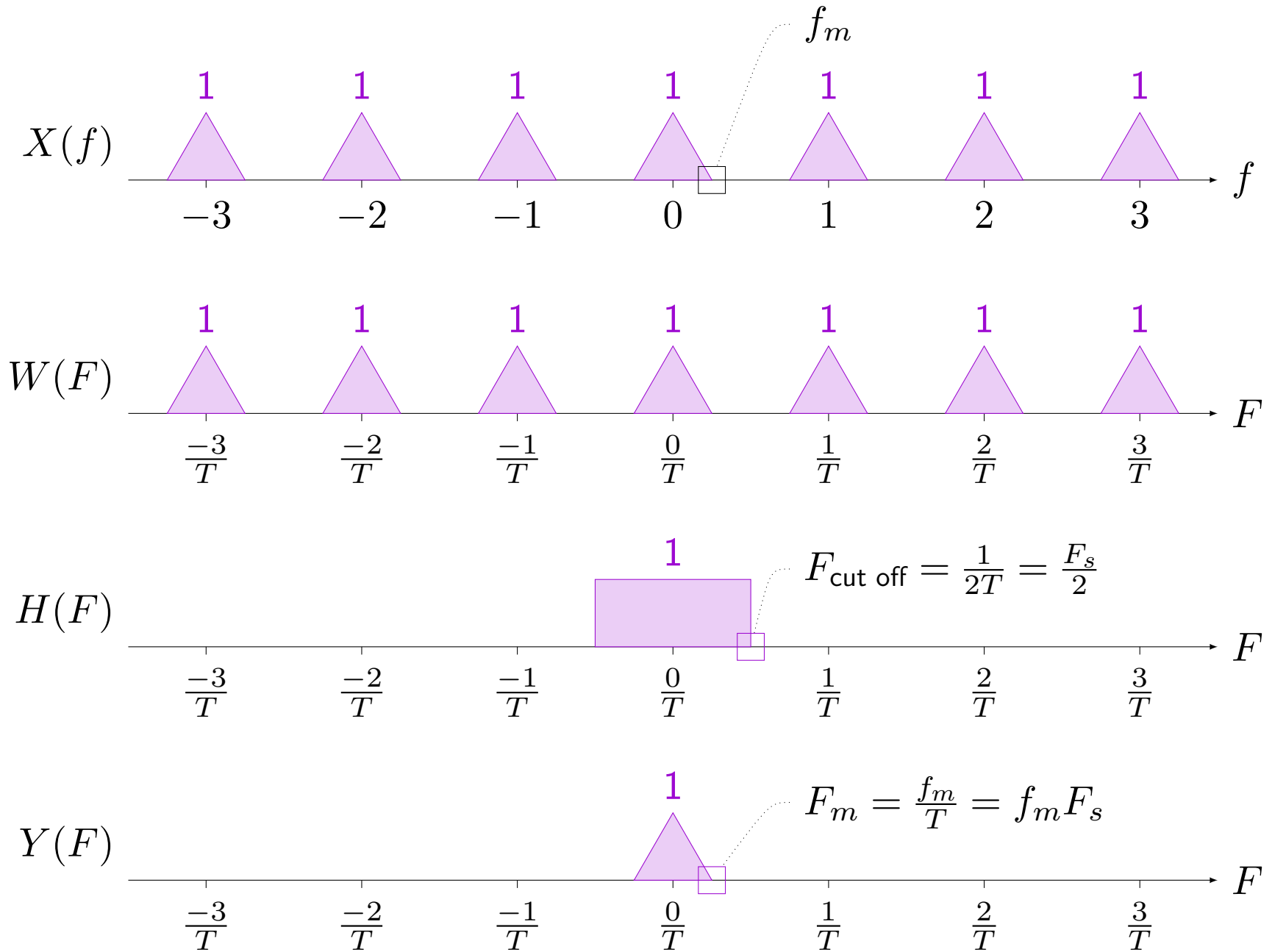
imaging formula: $\quad W(F) = X(FT) = X\left(\dfrac{F}{F_s}\right)$

LPF to remove images: $\quad Y(F) = \begin{cases} X(FT) = X\left(\frac{F}{F_s}\right), & |F| \leq \frac{1}{2T} = \frac{F_s}{2}, \\ 0, & \text{otherwise} \end{cases}$

graphical approach to reconstruction

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