

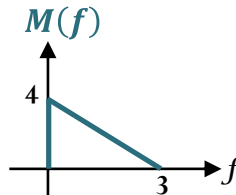
EES 351: In-Class Exercise # 5

Instructions

1. Work alone or in a group of no more than three students. For group work, **the group cannot be the same as any of your former groups in this class.**
2. [ENRE] Explanation is not required for this exercise.
3. Only one submission is needed for each group.
4. You have two choices for submission:
 - (a) Online submission via Google Classroom
 - PDF only.
 - Only for those who can directly work on the posted files using devices with pen input.
 - Paper size should be the same as the posted file.
 - No scanned work, photos, or screen capture.
 - Your file name should start with the 10-digit student ID of one member.
(You may add the IDs of other members, exercise #, or other information as well.)
 - (b) Hardcopy submission
5. **Do not panic.**

Date: 9 / 9 / 2020			
Name			ID <small>(last 3 digits)</small>

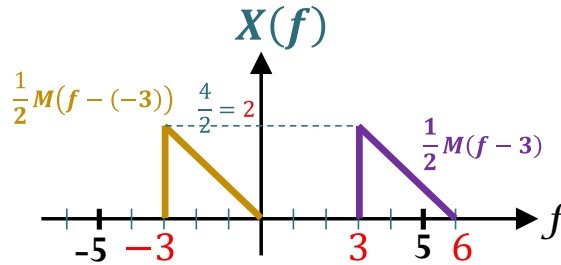
1. Consider a signal $m(t)$. Its Fourier transform $M(f)$ is plotted below.



Recall that

$$g(t)\cos(2\pi(f_c)t) \stackrel{F}{\Leftrightarrow} \frac{1}{2}G(f - f_c) + \frac{1}{2}G(f - (-f_c)).$$

- a. Let $x(t) = \cos(6\pi t)m(t)$.
Plot $X(f)$ in the corresponding space below.



- b. Let $x(t) = \cos(2\pi t)m(t)$.
Plot $X(f)$ in the corresponding space below.

