Special Problem II.B-16

A receiver is built with a narrowband **IF filter** at **200 MHz**.

The **local oscillator** is tuned to **800 MHz**.

The receiver has **no preselector** filter.

A. Say **just a single signal** appears at the **receiver input**, at a frequency of **1800 MHz**. Considering up to and including 3rd order products, determine the **frequencies** of all signals that appear at the **IF output of the mixer**. Which of these signals will also appear at the **detector** ?

B. Now determine the **frequency** of **any and all** signals at the **receiver input** that will result in some signal power reaching the **detector**. Consider products up to and including 3rd order.