1. Suppose we have an interlaced 1000 wide by 500 tall monochrome video with a 60 frame per second sample rate. How much data will that be per minute?

Since it is interlace, we grab 1/2 of the image every 1/60th of a second, so we are grabbing a whole image every 1/30th of a second.

\[
1000 \times 500 \times 1 = 500,000 \text{ bytes} \\
500,000 \times 30 = 15,000,000 \text{ bytes per second} \\
15,000,000 \times 60 = 900,000,000 \text{ bytes per minute.}
\]

2. Propose methods for dealing with interlaced video for each of the following problems:
   
a) Freeze frame
   
You have to grab once field and fill in the lines between

b) Half speed playback

Really have to play the fields, filling in the lines between