1. The salesperson in a cell phone store is telling me that the phone I'm considering has 8GB of memory, which means I can save 10,000 photos taken with the phone's camera! Is the salesperson telling me the truth?

Why or why not?

2. Below is a piece of text that has already been compressed, and shows some of the information about it. Show you know how this works by reconstructing the original text from the dictionary and compressed version.

Compressed Poem	Dictionary
<pre></pre>	 ★ bi ★ bu ★ the ★ g_↑g_ ★ t_8_↑ll_

3. Here's the same compressed text that you saw on the last level, but now we also see the size of the original, uncompressed text. On the previous level you reconstructed the text by tracing back through the dictionary. Now we're going to think about if this is a "good" compression rate.

Compressed:	Dictionary:
<mark>ੴ_<mark>&`兼★∱★</mark>¥t_<mark>ੴ_</mark>back</mark>	★ bi ↑ bu ♠ the
Compressed text size: 17 bytes Dictionary size: 26 bytes Total: 43 bytes Original text size: 58 bytes	لاتان روج لات من

Answer the following two questions:

- What is the compression rate, or the compressed text size + dictionary size compared to the original text size? (as a percentage)
- Is this a "good" compression rate? Why or why not?

4. Why do you want to compress anything? What's the point?

5. How many bytes (or bits) are required to encode an image that is 25 pixels wide and 50 pixels tall, if you encode each pixel with 3 bytes (24 bits) of RGB data.(Don't forget to add in the metadata! -- you should assume that we are using the file format used in this lesson with metadata that had 1 byte each for width, height and bits-per-pixel.)

6. Imagine that you have an image that is too dark or too bright. Describe how you would alter the RGB settings to brighten or darken it. Give an example.

7. Math the type of file with the description.

BMP	Uncompressed Sound
WAV	Uncompressed Image
JPEG	Compressed Image – Lossless
GIF	Compressed File – Lossless
MP3	Compressed Image – Lossless (256 color limit)
ZIP	Compressed Sound – Lossy
PNG	Compressed Image - Lossy