Graphics HW #5 - Book questions

On page 322 in Chapter 7, why is there a "3" in var myImage = new Uint8Array(3\*texSize\*texSize)?

In section 7.2, both TIFF and JPEG images are discussed. What is the difference between them and what is an advantage of each?

The TIFF files are large and uncompressed, and JPEGs are smaller and use compression. The advantage of JPEGs is they save space, the advantage of TIFFs is there is no lossy compression, meaning no data is lossed.

(Section 7.5) In WebGL, where in the graphics pipeline are texels read from the texture?

(Section 7.5) Write code that creates a texture object and sets the texels in it to be the data in a Uint8Array named data. You can assume that data represents a 64x64 image and has a total of 16384 elements in it.

(Section 7.5) If we have a 128x128 texel image, what texel would the texture coordinate (1.0, 0.0) correspond to?

On page 339, What does the "0" mean in the call to gl.uniform1i(gl.getUniformLocation(program, "texMap"), 0);?

(Section 7.5) What is the difference between gl.REPEAT and gl.CLAMP\_TO\_EDGE?

(Section 5.1) What is the difference between a perspective and a parallel view? What is one case when you'd want to use each (feel free to use Google to answer this second part)

(Section 5.1) What is the difference between one-point, two-point, and three-point perspective?

(Section 5.1, and possibly a bit after) What is the difference between what the model-view matrix and the projection matrix do?  
(Mostly skip section 5.3.2, and then use 5.3.3 for this) Assume that you want to have a camera located at (3, 5, 2) with a look-at point of (1, 0, 1) and an "up" vector of (0, 1, 0). Find the rotation part only of the camera matrix. Please show your steps in at least a mild amount of detail. You can use a calculator or other resource to compute the cross products and do other vector math. You can round to three decimal places at each stage.

(Section 5.4.2) What is a "right parallelpiped"? Why does that make sense as the view volume for a parallel projection?

(Section 5.4.4) What is the meaning of the term "2/(right - left)" in the parallel projection matrix?

(Section 5.6) What is the meaning of the near and far clipping planes?