

COM1370 Computer Graphics -- Quiz 2 -- Thursday, July 12th

Summer 2001 -- Professor Futrelle
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PRINT your name clearly _____ Your ID no. _____

Question 1.

Assume that a CLUT has a three-bit RGB color index and produces a 24-bit (3 byte) color output. Write out a CLUT that transforms the input colors into approximately correct grey levels. Some of the following decimal-binary pairs might help you and you can interpolate your own to get values that are a bit more appropriate:

0: 00000000
8: 00001000
16: 00010000
32: 00100000
64: 01000000
128: 10000000
255: 11111111

That is, you should write each entry of the CLUT table as a 24 bit value made up of three bytes.

Question 2.

Compute the square of the following transformation matrix where $A = \sqrt{2}/2$. Apply the original matrix to the point 1,0 and also apply the product matrix to the point 1,0. Discuss your result -- what is going on? What type of transformations are these? Hint: "square" simply means multiplying the matrix by (a copy of) itself.

$$\begin{bmatrix} A & -A \\ A & A \end{bmatrix}$$

ANSWERS HERE AND ON THE REVERSE SIDE: