**EE475 Fall 2019**

**HW#4**

**Prob. 3) Color coordinates:** Using the results of Prob.2, find the coordinates of cx in terms of {c1, c2, c3}

* First find cx23 as a function of c2 and c3 in terms of respective coordinates (xi,yi, i= 0, 1, 2, 3} or in terms of relative distances d(ci, cj). Recall the line equation y = ax + b
* Then find the line equation connecting c1 and cx23; You can then find the intersection of the lines (c2, c3) and (c1, cx) to find the location of cx23

c1

cx

c2

c23x

c3

Prob. 8) **Understanding the color cube:** Do all three parts, even a. For part c, make a difference whether one end of edge contains W or B.

RGB

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 000 | 001 | 010 | 011 | 100 | 101 | 110 | 111 |
| black | blue | green | cyan | red | magenta | yellow | white |

CMY

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 000 | 001 | 010 | 011 | 100 | 101 | 110 | 111 |
|  |  |  |  |  |  |  |  |

**6.15 Solid color squares**: When you plotting the HIS values of the squares, scale your 8 quanta levels to the range (0, 255).

**6.16 Display of HIS components**: For the saturation display, take into consideration that these are spectral colors.