1. Convert #D8E7AF to integer RGB values and real RGB values. Round RGB values to three decimal places.

+6 Integer: (216, 231, 175) Real: (0.847, 0.906, 0.686) +3

2. Convert (200, 93, 249) to hexadecimal and real RGB values. Round as before.

+6 Hexadecimal: #C85DF9 Real: (0.784, 0.365, 0.976) +3

3. You have a color represented by (0.6 × random(), random(), 1). Circle all colors which are possible. (Assume that random() can return both 0 and 1.)

R G (B) (C) M Y K W

+8

4. You have a color represented by (1, 0.5 × random(), b × random()), and $0 \leq b \leq 1$. The only information you know is that you **cannot** make magenta with this formula. Circle all statements which *must* be true. There may be more than one!

(a) b cannot be 0.
(b) b cannot be 1.
(c) You cannot make black.
(d) You cannot make white.

+8

5. You are coloring the line segment from $(0,0)$ to $(1,0)$ so that the point $(x,0)$ is assigned the color $(0,x,1)$. Describe in a sentence or two how this line segment is colored.

(0,0) is assigned blue

(1,0) is assigned cyan.

+5 The line segment turns from blue to cyan as you go from left to right.

6. You have a color represented by $(a,\ 1-b\times\text{random}(),\ c\times\text{random}())$. Give values for a, b, and c so that you can make yellow, but you cannot make cyan. You only need to give one set of values (a,b,c). Make sure $0\le a,b,c\le 1$.

$a = 1$

+5 $0 \le b \le 1$

$c < 1$

7. Each of the figures below is drawn inside a unit square with vertices $(0,0)$, $(0,1)$, $(1,1)$, and $(1,0)$. Label the vertices of the figures on the graphs.

+8