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Calculate normalized RGB values

Using Readings from Jenee's 15" 2010 matte Macbook Pro

```
%Manual entry of RGB values taken from photoshop
cam_RGBs = [101,71,57;216,166,143;98,127,169;82,108,63;148,140,197;...

 120,219,199;216,120,44;57,73,160;214,88,100;82,42,95;169,213,74;...
    242,184,61;29,33,124;55,140,66;188,42,57;245,229,63;206,75,153;...
    31,129,166;233,238,232;194,200,196;151,153,152;105,109,108;...
    62,63,65;31,32,36]';

%Normalize RGB values
cam_RGBs = cam_RGBs./255;
fprintf('cam_RGBs = \n');
disp(cam_RGBs);

%Grab final 'row' of RGB values for colorchecer chart
%Sort from black to white
cam_grey_rgbs = cam_RGBs(:,19:24);
cam_grey_rgbs = fliplr(cam_grey_rgbs);
fprintf('cam_grey_rgbs = \n');
disp(cam_grey_rgbs);
```

```
cam_RGBs =
  Columns 1 through 7

    0.3961    0.8471    0.3843    0.3216    0.5804    0.4706    0.8471
    0.2784    0.6510    0.4980    0.4235    0.5490    0.8588    0.4706
    0.2235    0.5608    0.6627    0.2471    0.7725    0.7804    0.1725

  Columns 8 through 14

    0.2235    0.8392    0.3216    0.6627    0.9490    0.1137    0.2157
    0.2863    0.3451    0.1647    0.8353    0.7216    0.1294    0.5490
    0.6275    0.3922    0.3725    0.2902    0.2392    0.4863    0.2588

  Columns 15 through 21

    0.7373    0.9608    0.8078    0.1216    0.9137    0.7608    0.5922
    0.1647    0.8980    0.2941    0.5059    0.9333    0.7843    0.6000
    0.2235    0.2471    0.6000    0.6510    0.9098    0.7686    0.5961

  Columns 22 through 24
```

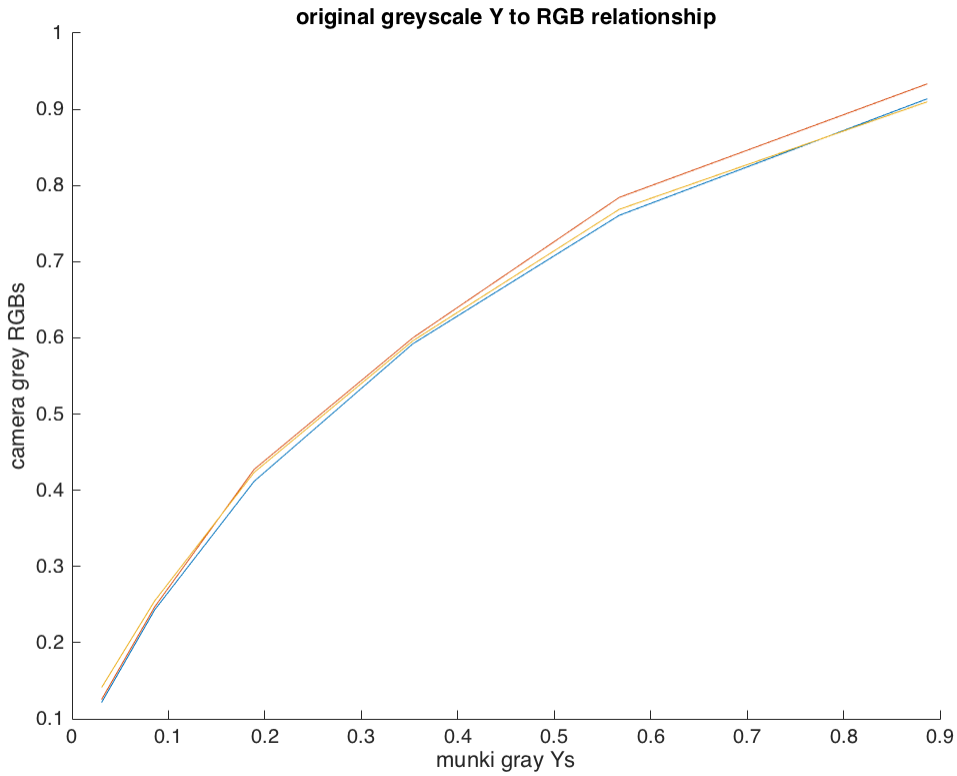
```
    0.4118    0.2431    0.1216
    0.4275    0.2471    0.1255
    0.4235    0.2549    0.1412

cam_grey_rgbs =
    0.1216    0.2431    0.4118    0.5922    0.7608    0.9137
    0.1255    0.2471    0.4275    0.6000    0.7843    0.9333
    0.1412    0.2549    0.4235    0.5961    0.7686    0.9098
```

Lab Step 4 - Calculate normalized Y values

```
%Calculate normalized Y values for patches 19-24
munki_values = importdata('munki_CC_XYZs_Labs.txt');
munki_gray_Ys = fliplr(munki_values(19:24,3)'./100);

fprintf('munki_gray_Ys = \n');
disp(munki_gray_Ys);

munki_gray_Ys =
    0.0307    0.0858    0.1889    0.3534    0.5674    0.8868
```

Graph RGB Versus Grey Y values

```
clf;
hold on;
plot(munki_gray_Ys, cam_grey_rgbs(1,:));
plot(munki_gray_Ys, cam_grey_rgbs(2,:));
plot(munki_gray_Ys, cam_grey_rgbs(3,:));
title('original greyscale Y to RGB relationship');
xlabel('munki gray Ys');
ylabel('camera grey RGBs');

hold off;
```



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