MTH208: Assignment 2

Write a function `prop.grey` that calculates the proportion of pixels in a given image that are roughly a shade of grey. The function should take an `imager` image as input and then perform the following tasks:

1. Using function `round()` , round `imager` image array to a single decimal digit.
2. Calculate the proportion of pixels of the rounded image matrix that have all three channels the same. That is, find the proportion of pixels of the form (a, a, a) for any $a \in [0, 1]$.

The function should take one argumenta; `img` which will be an `imager` image. **Note:**`img` will not be a file name, but rather an an already loaded image using `imager` package.

The function should look like

```
prop.grey <- function(img)
{
  ...
  ...
  return(...)
}
```

Copy and paste your entire function in the `assignment2.R` file on Github to submit the assignment. ONLY PASTE YOUR FUNCTION, AND NOTHING ELSE.

Note: there is an image `campus.jpeg` available in the GitHub repository for you to test the function on. I may use any other image to calculate the require proportion for any color of my choice. Thus your function should work for any `imager` image and any color vector. To test your function, I will use commands like below:

```
library(imager)
pic <- load.image("my-pic.jpeg") # any random pic chosen by me
prop.grey(pic)
```