

Which gray matches the value of the brown bar?

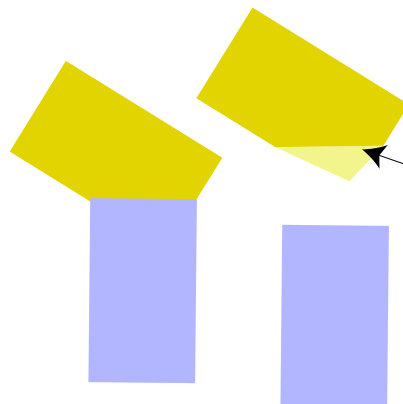
Which hue matches the value of the brown bar?

The trained eye can discriminate among some 240,000 different colors. This includes all the tints, tones and shades of a given hue. In addition to its hue, each color has a value. Determining the value of a color is not a simple task. If, in the above pre-test you picked B, you show a good sense for the color value. The brown swatch is distinctly lighter than the gray A or colored C. It is also considerably darker than both Ds. If you picked this latter match, we have our work cut out for us.

Let's test our ability to discriminate value by doing the following: Create two color swatches which are equal in value but very different in hue and temperature.

Compare your choices with other students until you're convinced you have matching values. Critique: The class will first screen the pairs which are least alike in value, followed by close, but still different valued hues. All final judgment will be made by the teacher. The graduate students at Yale consistently realized a 60% failure on their first try, so don't be overly discouraged if you share some failures in your quest to distinguish color value. Exploitation: Identify your problem and try again.....and again.....and....

HELPFUL HINT: When all else fails, you might try the Albers' trick of placing a corner of one color over the other. After staring at these overlapping colors for 15 seconds in a bright light, pull the top color off and keep your eyes on the spot where the color once overlapped. If the after image is lighter than the background color, it means that the overlapping color was darker in value. The reverse is true if the after image is darker. Refer to the example at the right.



**After Image**  
The after image is always the opposite hue and value of the original. In this example the after image appears lighter and yellow, suggesting that the lavender is a darker value.

Music has a scale which ranges from the lowest audible sound to the highest. The musician can play a series of notes which differ in range in any key. This transposing from one key to another changes all of the notes, but maintains the intervals between notes. Similarly, the artist can change the hue of a color without changing the value. The example above shows a transposition of red and orange in "A" to brown and green in "B" without changing the values of the original colors. Example "C", on the other hand has changed both hue and value.

In example "A" note how close the value of red is to the gray background. See how similar the brown value is to the same gray in example "B". Also note how much lighter the yellow orange is when compared with the gray, and how much easier it is to read it when contrasted in value as well as hue. The same is true of the light green in example "B". Note how in example "C" the darker blue stands out against the gray while the lavender is almost the same value as the gray and is consequently difficult to distinguish the edges at a distance. This blending along the edges is called *vanishing boundary*.

Assignment: Create a simple composition consisting of 4 different warm colors of varying values. Arrange them according to the example. Transpose these colors into 4 cool colors or neutral grays without changing their relative values.



**Helpful Hints**  
Compare both the value contrast of the background colors with those of the foreground. For example, the top pink is how much lighter than the brown. Is this contrast equal to that of the inner green and gray squares?  
  
Between what two colors is the contrast greatest? Which two background colors are closest in value?

Testing our ability to discriminate value:  
Create a pair of color swatches which differ in hue but are equal in value.