

## Double & Half

Each stop on the camera—whether film speed, shutter speed, or aperture—is an increment of either double or half the exposure of the adjacent stop. So by dividing and multiplying by two, you can calculate exposure mentally.

ISO 400 is twice as sensitive to light as ISO 200, four times as sensitive as ISO 100, and half as sensitive as ISO 800.

Although the f/stop numbers may seem irregular, f/8 is double the size of f/11 and therefore lets in twice the amount of light. Conversely, f/16 lets in half the amount of light as f/11.

1/500 is twice as fast as 1/250 and therefore halves the duration that the film is exposed to light. Conversely, 1/125 is half as fast as 1/250 and thus doubles the duration that the film is exposed to light.

This is essential knowledge for calculating exposure without the aid of a light meter or tabulated charts. For example, LV tables show that using ISO 100 film, f/16 at 1/125, gives the correct exposure in daylight (The Sunny 16 Rule). Given that all factors either double or halve, we can calculate which settings we need to get the correct exposure at ISO 200. ISO 200 is twice as sensitive to light as ISO 100, so the amount of light reaching the film has to be halved. There are two ways to go about this: either halve the shutter speed to 1/250 and stay at f/16, or keep the shutter speed at 1/125 and stop down to f/22.

