Sunny 16 Rule

In photography, the **sunny 16 rule** (or, less often, the "**sunny *f*/16 rule**") is a method to estimate correct daylight exposures without using a light meter.

The basic sunny 16 rule, applicable on a sunny day, is this:

- Set aperture to *f*/16 and shutter speed (reciprocal seconds) to ISO film speed.

For example, for ISO 100 film, choose shutter speed of 1/100 second (or 1/125 second)

The elaborated form of the sunny 16 rule for more general situations is:

1. Set the shutter speed to the setting nearest to the ISO film speed
2. Set the f-number according to the table below:

Aperture	Lighting Conditions	Shadow Detail
f/16	Sunny	Distinct
f/11	Slight Overcast	Soft around edges
f/8	Overcast	Barely visible
f/5.6	Heavy Overcast	No shadows
f/4	Sunset	

For example, to shoot ISO 100 film in sunny conditions, set the shutter speed to 1/100 or 1/125 and the f-stop to *f*/16. With ISO 200 film, set the speed to 1/200 or 1/250. For ISO 400 film, 1/400 or 1/500. As with other light readings, the shutter speed can be changed, as long as the f-number is compensated. For example, 1/250th of a second at *f*/11 would be equivalent to 1/125th at *f*/16.

USING THE SUNNY 16 RULE

1. **Gauge Your Light**
   For the Sunny 16 Rule to work, you'll first need a sunny day. The rule can also work with other lighting situations such as cloudy and overcast — take a look at the next list for those.
2. **Set Your F-Number**
   Set your f-number to f/16. If you don't have strong sunlight, use the next list to determine your starting f-number.
3. **Set Your Shutter Speed**
   Take note of your ISO or film speed (let's call it "X"). Now set your shutter speed to 1/X. So at ISO 400, you'd use a shutter speed of 1/400 seconds.
4. **Adjust With Reciprocals**
   You may want to use different shutter speeds or f-numbers. You can adjust one as long as you adjust the other accordingly. Opening up by one full f-number requires cutting your shutter speed in half (and visa versa).

VARIATIONS ON SUNNY 16

1. **f/16 for Sunny**
2. **f/11 for Slight Overcast**
3. **f/8 for Overcast**
4. **f/5.6 for Heavy Overcast**
5. **f/4 for Sunset**

F-STOP GUIDE

Since most cameras offer full stops, half stops, and third stops, you'll need to have a handle on which ones are full stops so you can use the rule of reciprocals to change your f-number and shutter speed. Here's a list of full f-stops.

f/1 - f/1.4 - f/2 - f/2.8 - f/4 - f/5.6 - f/8 - f/11 - f/16 - f/22 - f/32 - f/45

But you don't need to memorize these numbers — there's an easy little trick to them. You actually just need to remember two numbers: **1** and **1.4**. These are the first two full stops in the list. Double them and you get the next two in the list. Double those and you get the next two numbers. Check it out:

1.0 - 2.0 - 4.0 - 8.0 - 16 - 32
– 1.4 - 2.8 - 5.6 - 11 - 22 - 45

You'll notice that twice 5.6 isn't exactly 11 and twice 22 isn't 45. This is because the bigger numbers are rounded and the starting number isn't exactly 1.4 — it's 1.41421356… or the square root of 2.