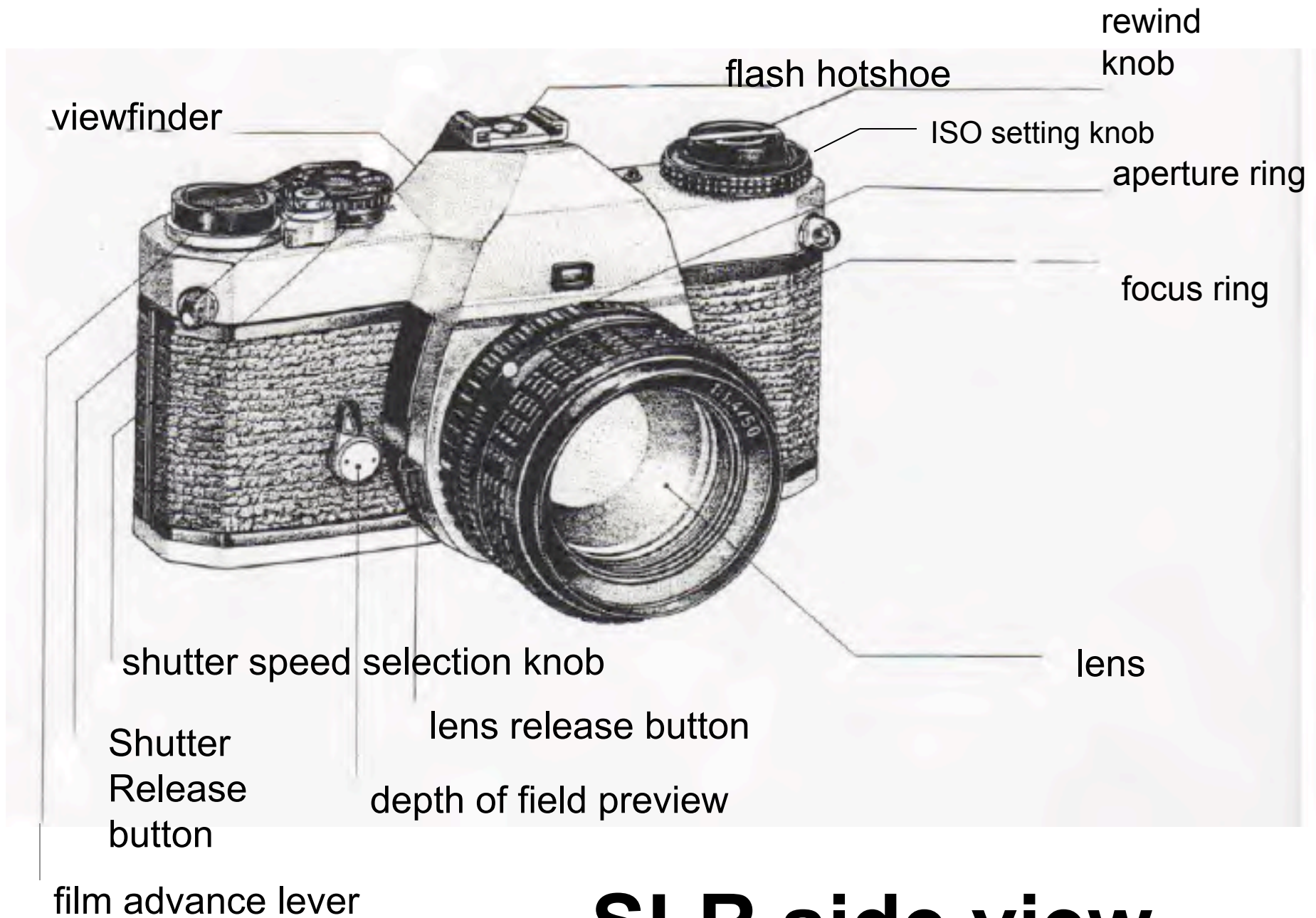


Camera and Shooting Basics

Learning Goal:

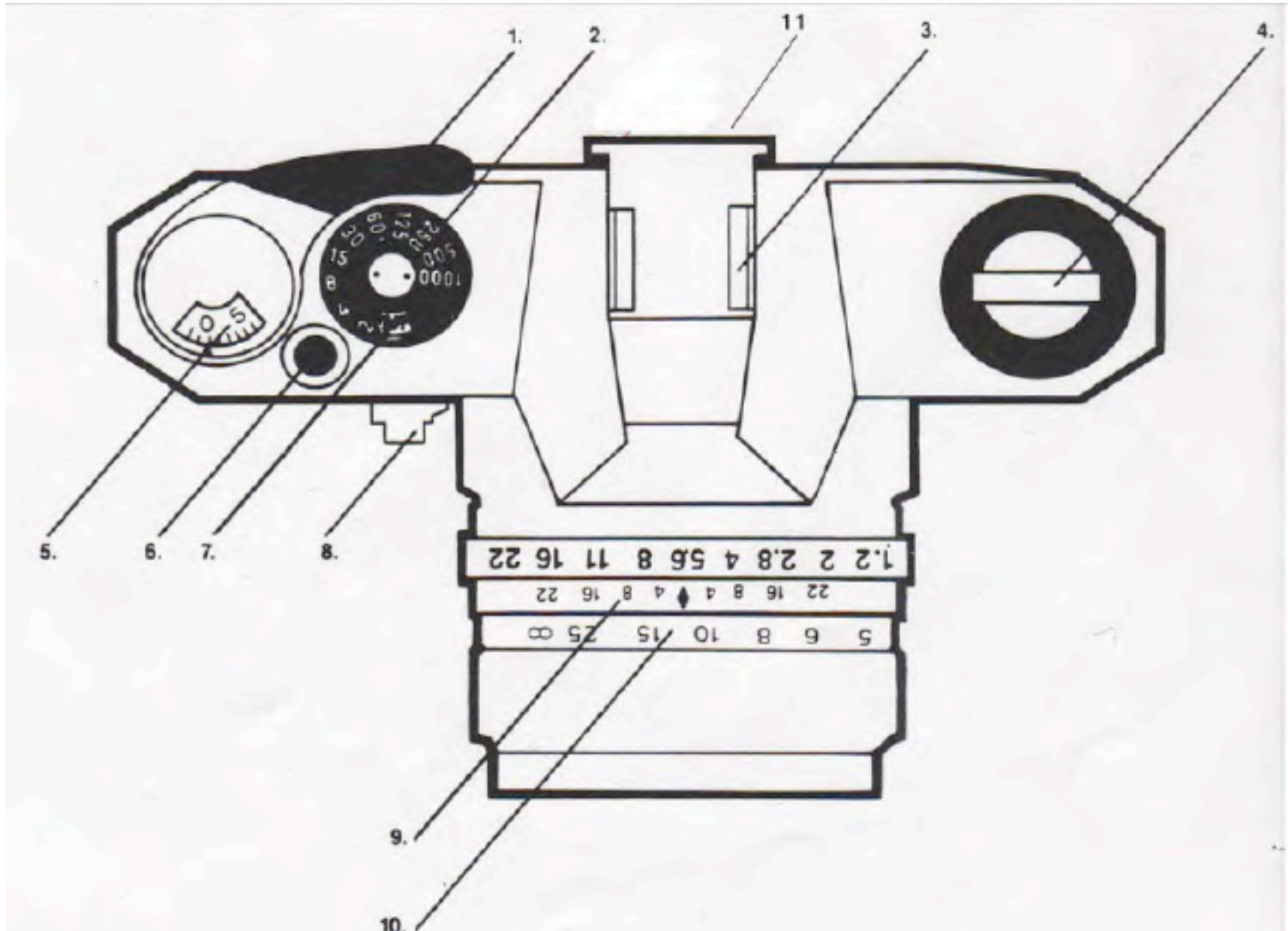
- What are the 3 basic things I need to know how to control on a manual SLR camera when I take a photograph?

By Marcine Linder



SLR side view

SLR top view

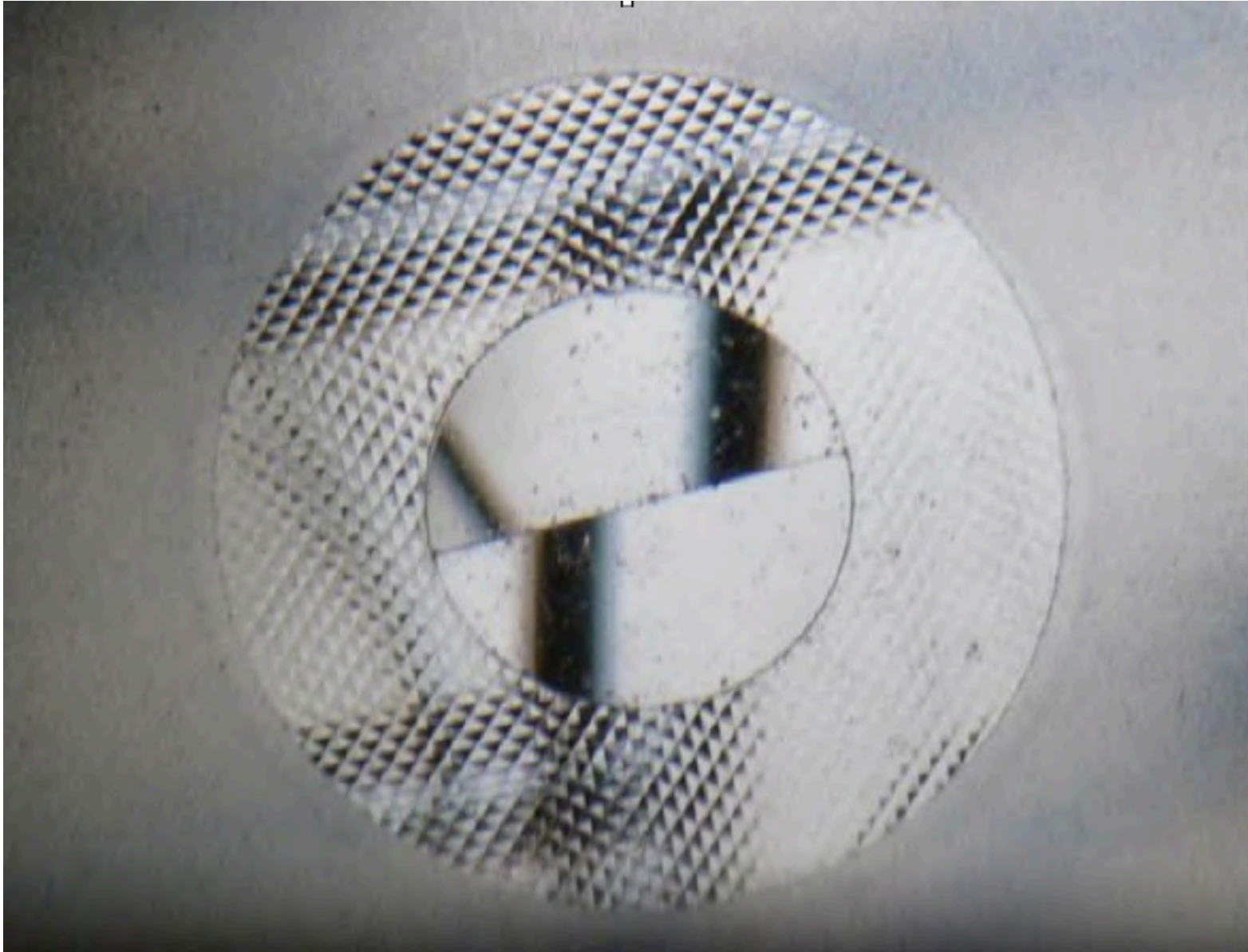


What are the **3 most basic things** that must be correctly controlled by a photographer taking a picture **with a manual SLR camera** in order for the picture to turn out?

1: Focus

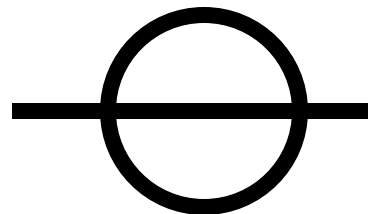


1: Focus: method A: the Viewfinder



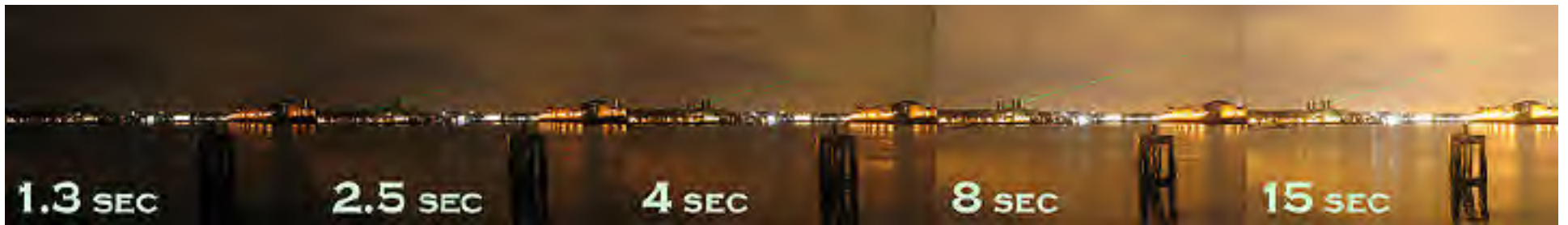
focus using the ground glass and split screen in the viewfinder as a guide

Focus Method B: the lens barrel, measuring tape and film plane symbol



film plane symbol

2: Exposure



Overexposed Images

(too much light)



Overexposed images are

- glaringly light
- few details are visible
- the full range of tones (from the lightest to the darkest) are not visible

(only **highlights** and some **midtone**s)

Underexposed Images

(not enough light)



Underexposed images are

- dark
- few details are visible
- the full range of tones (from the lightest to the darkest) are not visible (only **shadows** and some **midtone**s)

Correctly Exposed Images



Correctly exposed images

- many details are visible
- the full range of tones (from the lightest to the darkest) are visible

How Exposure adds up

How many ways can you combine two numbers to add up to 10?

$$1 + 9$$

$$2 + 8$$

$$3 + 7$$

Shutter speed

$$4 + 6$$

aperture

$$5 + 5$$

$$6 + 4$$

$$7 + 3$$

$$8 + 2$$

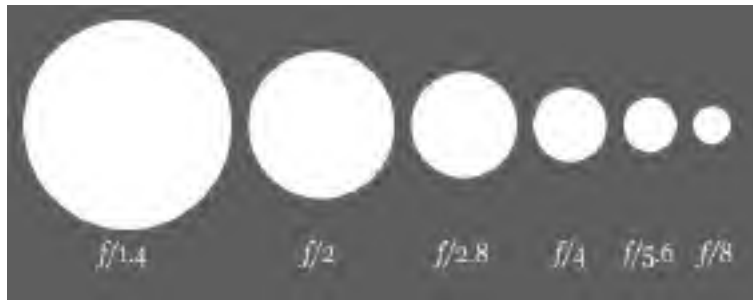
$$9 + 1$$

How to Control Exposure

Exposure is determined by two factors that control the amount of light that reaches the film (or chip in a digital camera):

1) **Shutter speed** = how quickly the shutter in the camera opens and closes ex. 1/1000 second vs. 1/30 second (4 “stops” or 32x as much as 1/1000)

2) **Aperture** = the size of the opening in the lens: ex. f 8 creates a small opening that lets in a small amount of light, f 1.4 creates a large opening that lets in a large amount of light (5 “stops” or 64x as much as f8)

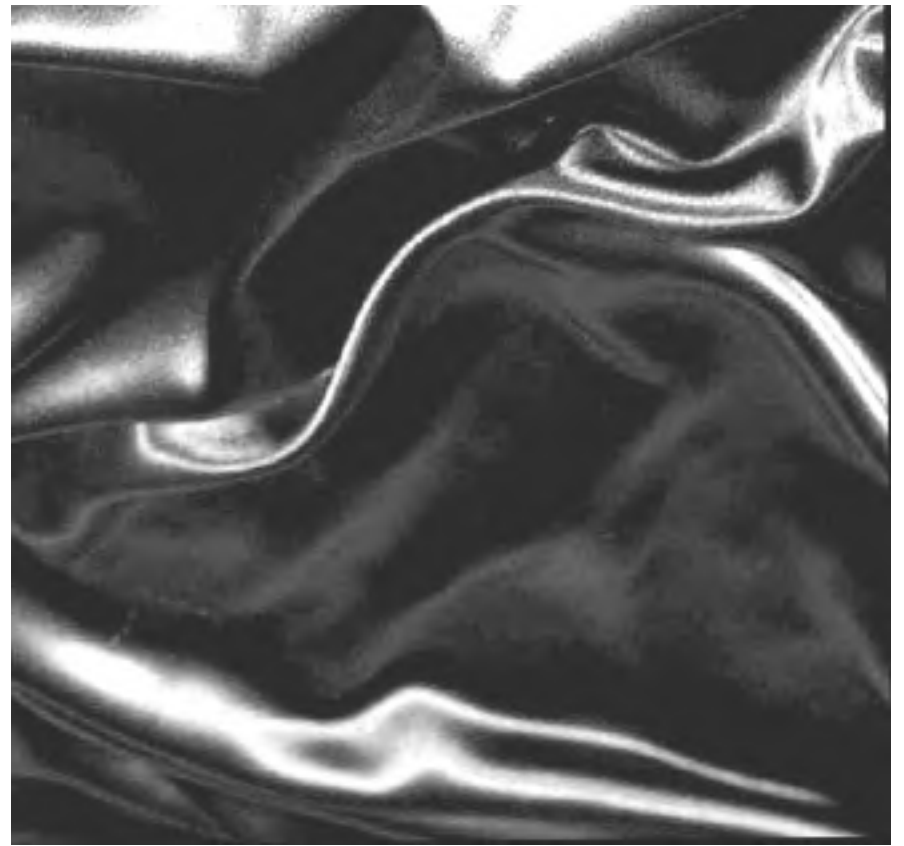


How much does exposure
Increase when a stop is added?
How much does exposure decrease
When a stop is taken away?

When Light Meters are Fooled



black satin as it looks in life



black satin as seen by a light meter

When Light Meters are Fooled

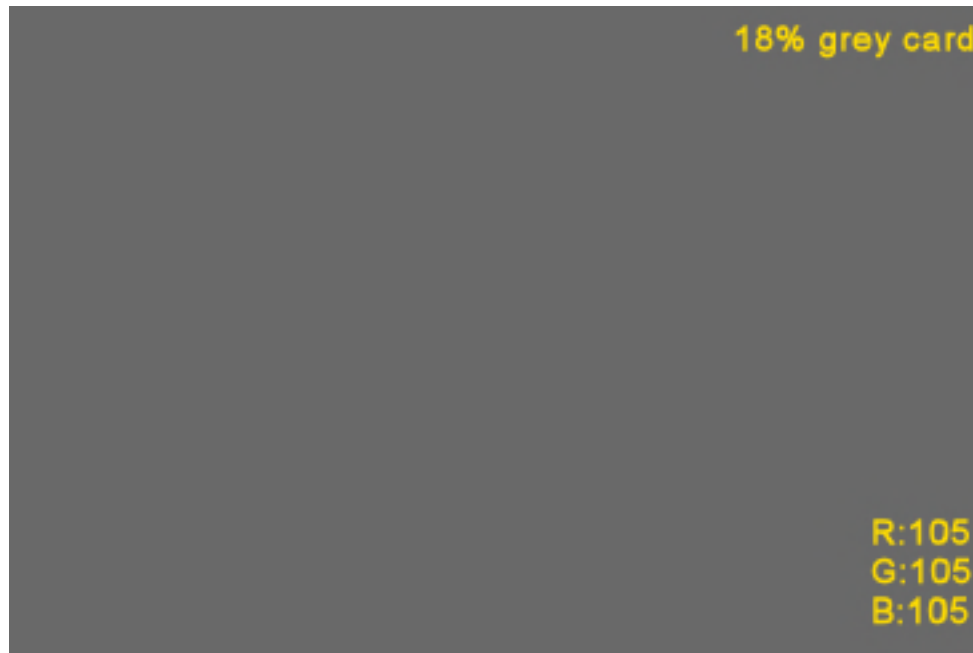


snow as it looks in life



snow as seen by a light meter

The 18% Grey Card

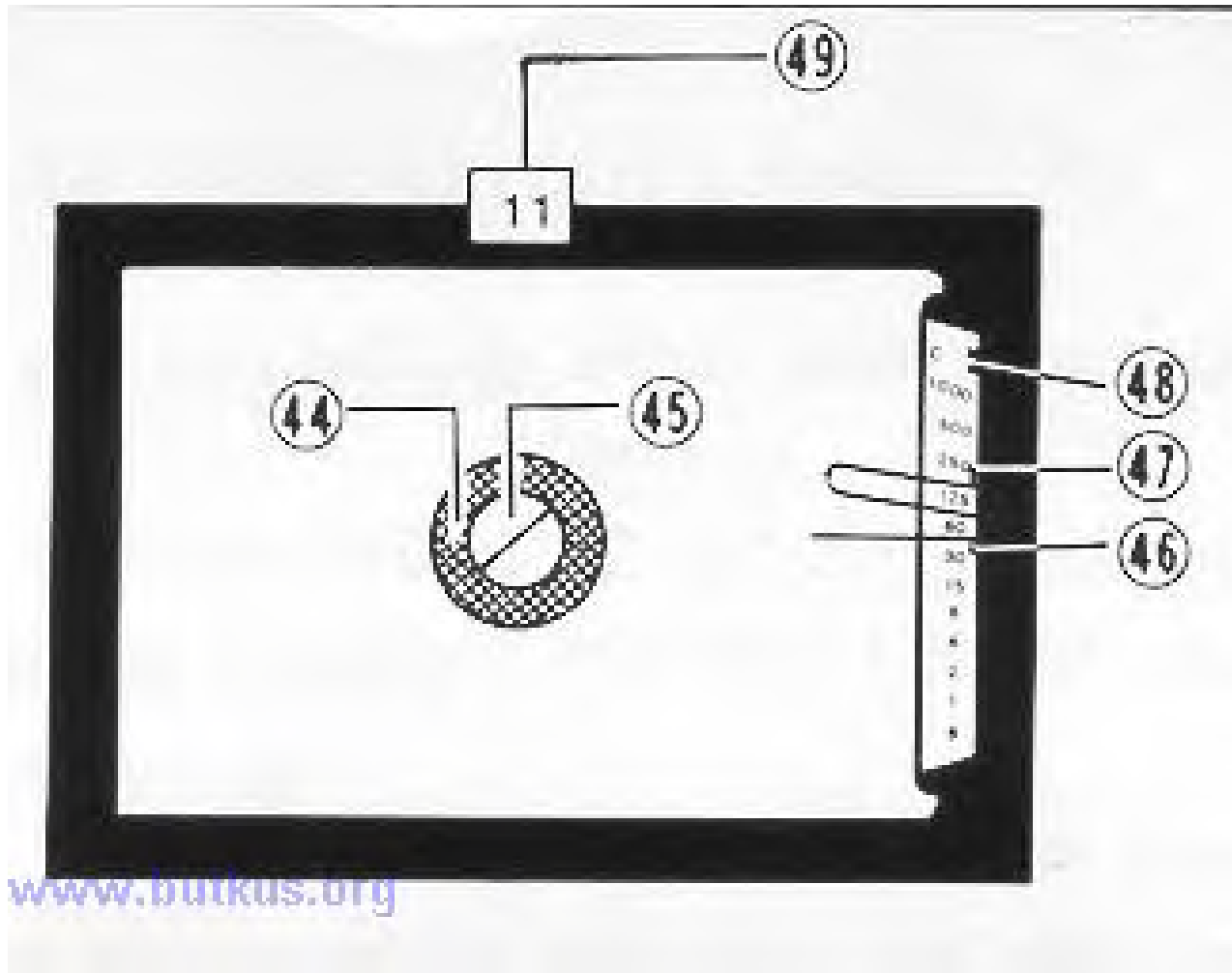


Some scenes such as snowy landscapes, beaches, black or white satin can fool light meters into giving incorrect readings. **18% grey cards** are used to help photographers correctly measure exposure using their cameras' built in light meters

The **palms of human hands** (all races) and **green leaves, grass** all register as **18% grey** on a negative when properly exposed

Light meters are designed to give exposure readings that will create a **value** of **18% grey** on a negative.

Exposure



Typical manual SLR viewfinder: to the right is the light meter. In this camera when the thick needle (47) and the thin needle (46) line up the exposure setting (according to the meter) is correct

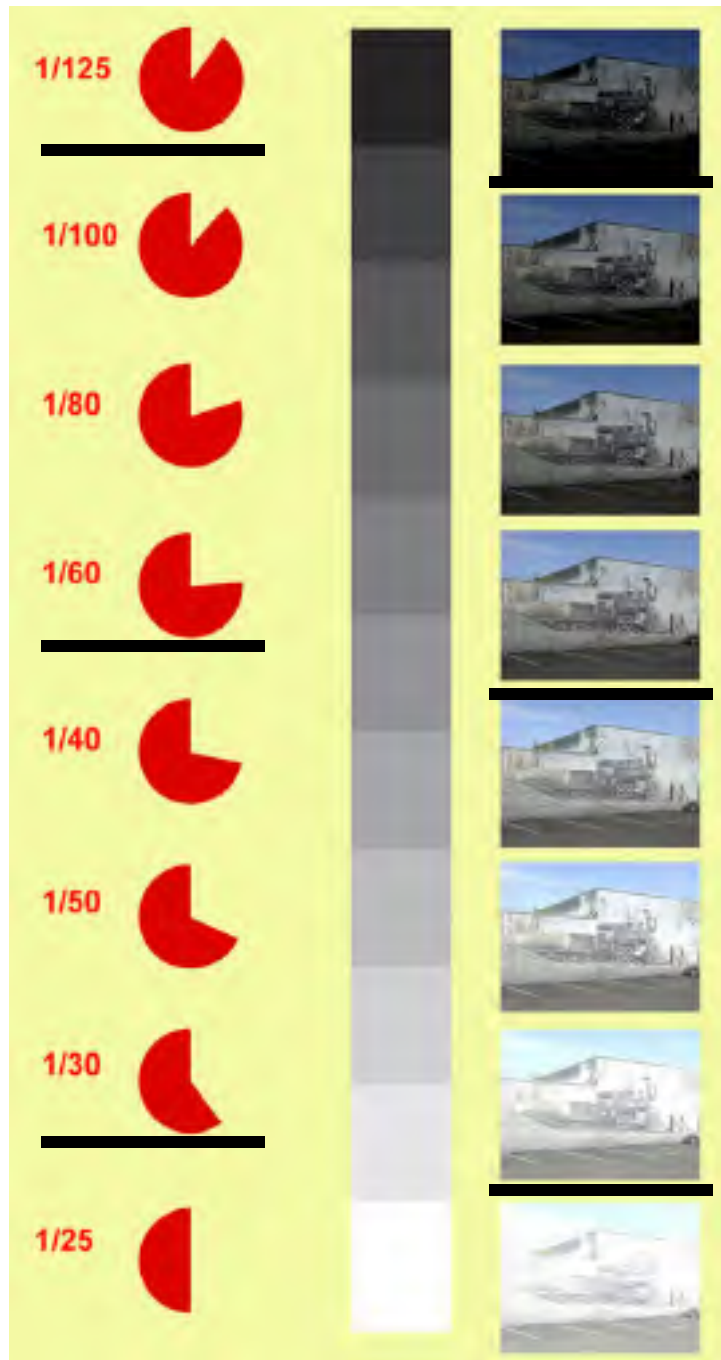
Exposure

The ISO of the film chosen (or setting chosen on a digital camera) will determine how much light is needed to take a picture.

- **100 ISO** slow speed, ideal for bright sun
- **400 ISO** medium speed, ideal for indoor and outdoor shots
- **800 ISO** fast speed, ideal for fairly low light situations
- **1600 ISO** very fast speed, ideal for VERY low light situations

*Be sure to **set the ISO speed** on your manual SLR camera for the film you have loaded. If you do not, your light meter's exposure readings will be **incorrect***

Other factors must also be considered when choosing an ISO speed but you will learn about those later! For the moment, use these as a guide



Exposure Scale

To the right is a sample exposure scale showing from the top down an underexposed image (not enough light) to an overexposed image.

Note: not all of these shutter speeds exist on manual SLRs - some of these speeds (1/25s, 1/40s, 1/50s, 1/80s, 1/100s became possible with electronic film and later digital SLRs)

3: Composition



How would you describe the different compositions in each of these photos?

(use the elements and principals of art in your answer)

