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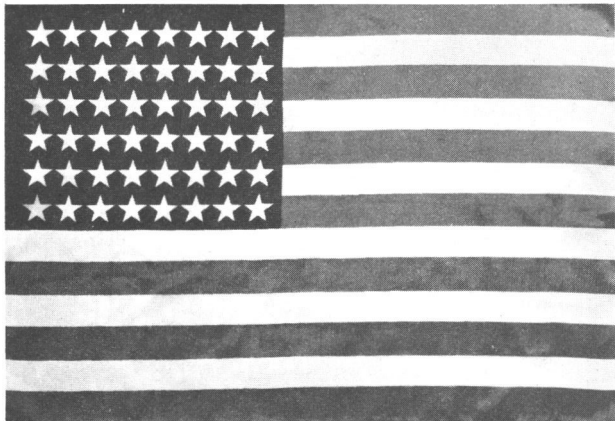
Using Sunlight for Better Pictures

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This booklet is written in the form of a *Programed Text*. In order to proceed through the material you will be required to make certain responses. You are to “think” the right words or symbols, fill them in with pencil or otherwise react. Study the photographs and drawings carefully to find the correct clues. Take plenty of time. When you have completed each double page, turn to the next. In the upper left hand corner of the right hand page you will find the correct answer to the previous page. Continue in this way through the book.

IN THIS BOOKLET you will learn that the old saying: “Have the sun behind your back when you are taking a picture” is not really a very good rule. It is the purpose of the booklet to teach you that more interesting pictures can be taken by having the sun’s rays coming from some other direction than from behind the photographer.



A photograph records the differences in dark and light of a subject. These differences may be due to the nature of the subject. For instance, the flag could be photographed because the white stripes and stars were _____ than the red stripes and the blue field. This allows us to make faithful two-dimensional photographic records of the subject.

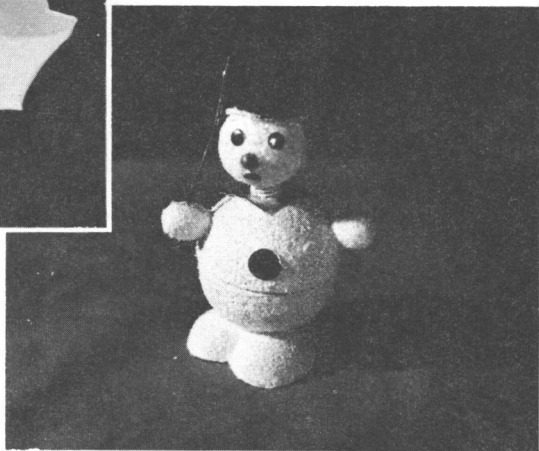
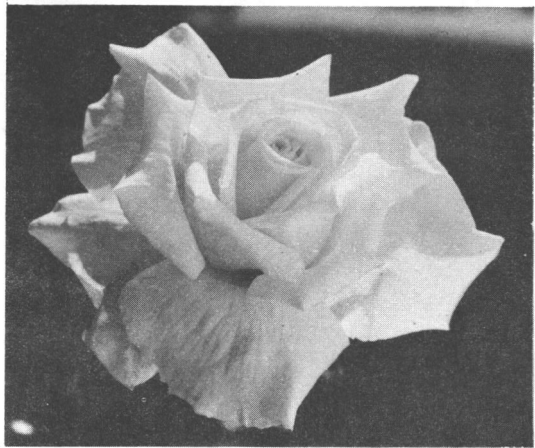




lighter

Such photos however are usually not very interesting and tell us little about the third dimension of the subject. Differences in dark and light may also be the result of unequal lighting. For instance one side of the subject may be _____ with direct sun's rays while the other side is in _____.

The words *highlights* and *shadows* are used in photography to describe the areas of _____ and _____ in the picture caused by unequal lighting.

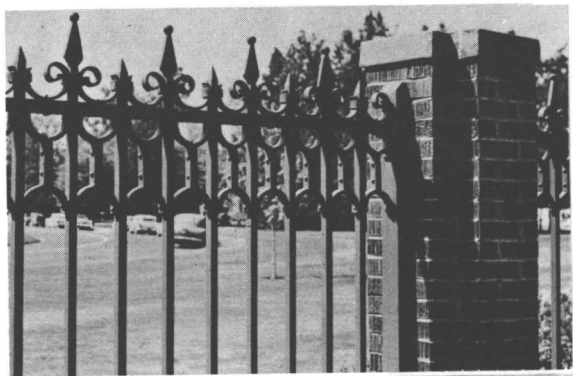


lighted

shadow

light and dark

The *highlights* and *shadows* thus formed seem to add *shape* to the subject. These _____ and _____ may be formed by light coming from the side or from the rear of the subject. There are many variations within these directions.



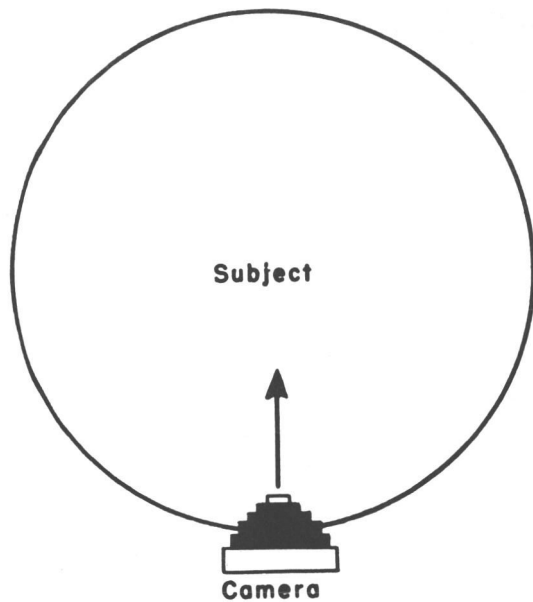
highlights and shadows

The bright areas in the picture are called _____. The dark areas which are not lighted by direct rays from the sun are the _____.

highlights

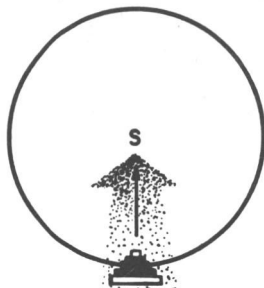
shadows

If we want to take more interesting photographs we will arrange the subject and the camera to use this unequal lighting. In other words we will depend not only upon differences in light and dark belonging to the subject itself, but will place the camera so it can “see” the _____ and _____ caused by unequal lighting of the subject.

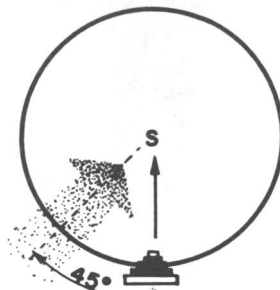


highlights and shadows

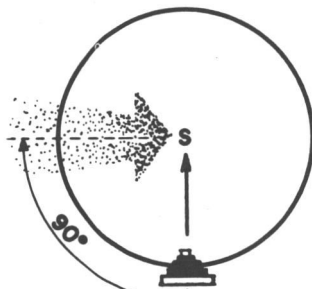
To demonstrate the *angle of lighting* we can use a diagram like this. The _____ is placed at the center of the circle and the _____ on the circle facing the subject.



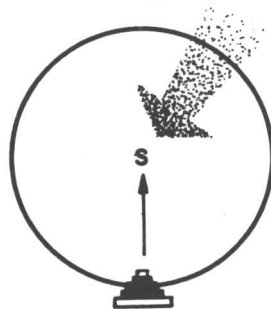
Front Lighting



45° Lighting



90° Lighting



Back Lighting

subject

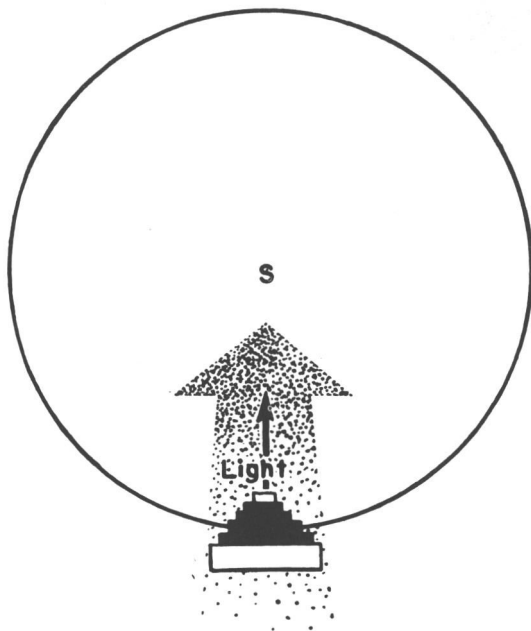
camera

The *angle of lighting* is the angle between the direction the camera is pointing and the direction of the light rays.

The light may go in the same direction the camera is pointing. This is called _____ lighting.

The light may come from the side. Then the angle of lighting is either ____ or ____ degrees.

When the light comes from somewhere behind the subject we call it _____ lighting.

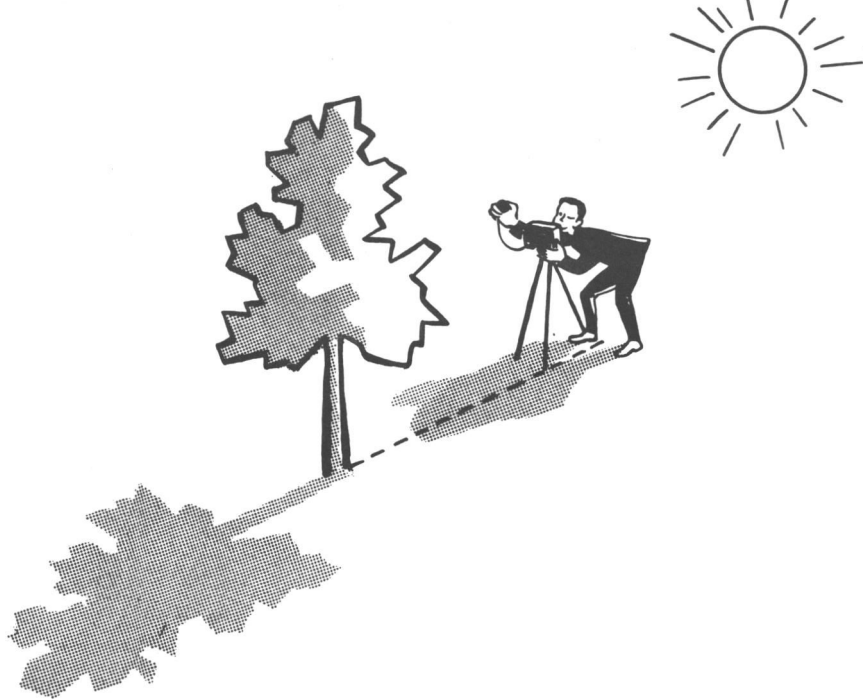


front

45 or 90

back

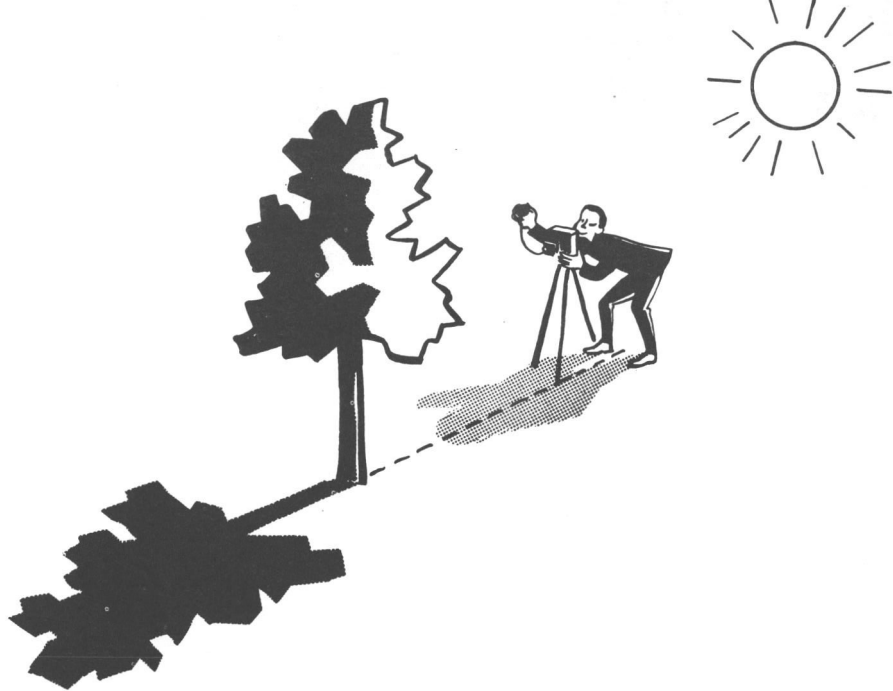
When the light shines in the same direction that the camera is pointing the _____ of _____ is 0 degrees. This is called zero (0) degrees or _____.



angle of lighting

front lighting

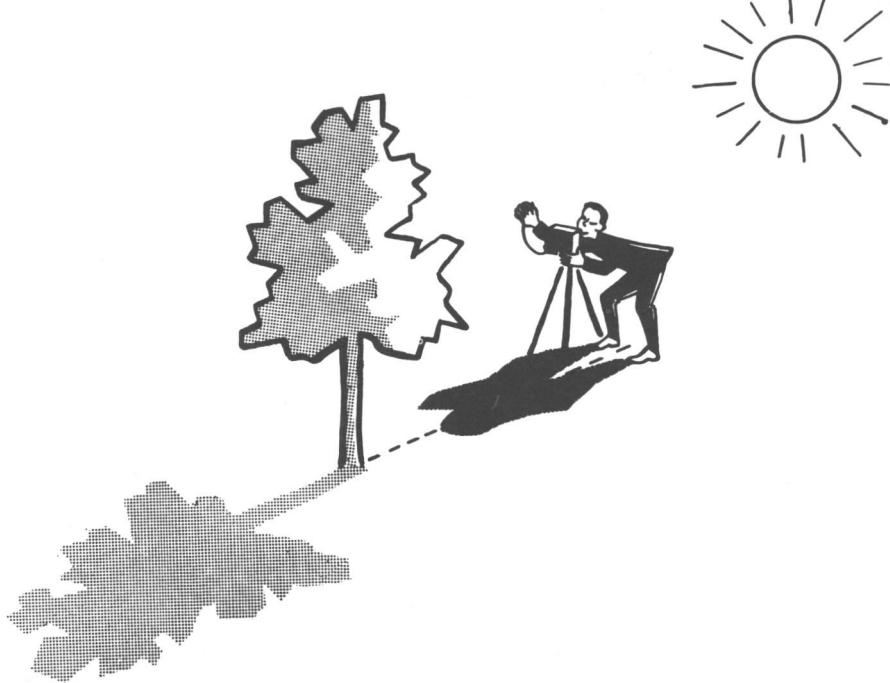
When the light comes from directly behind the photographer we have ____ degrees or _____ lighting.



0

front

With _____ lighting a shadow is cast, of course, but it falls directly behind the tree and cannot be “seen” by the _____.

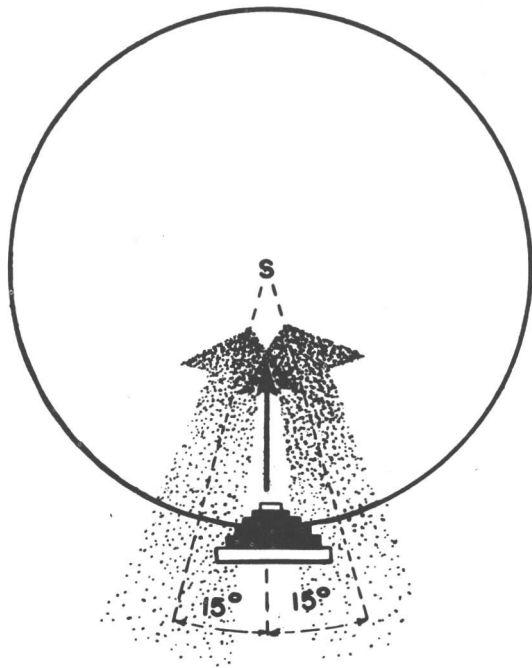




front

camera

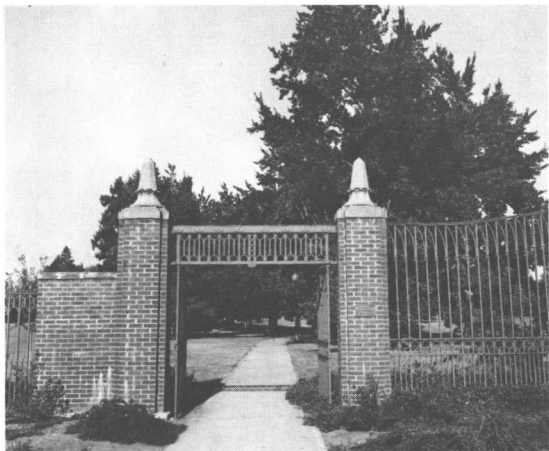
A good way to check the angle of light is to look at the shadow cast by you, the photographer. When your shadow points straight toward the subject, you have _____ lighting.



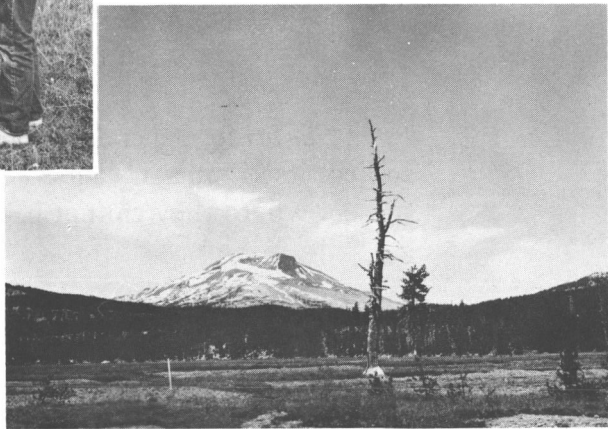
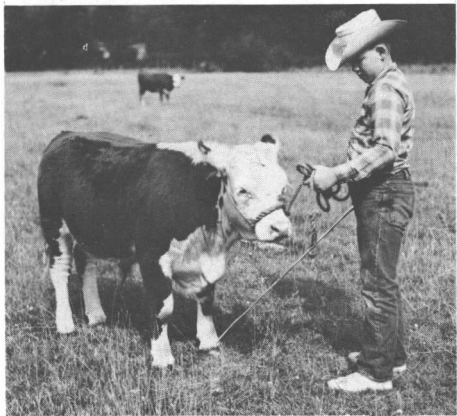


front

For practical purposes *front lighting* can be said to include angles varying from about 15 degrees either to the right or left of the photographer. So *front lighting* includes a total angle of about ____ degrees.



Front lighting depends upon contrasts belonging to the subject itself since it casts the _____ directly behind the subject where they cannot be “seen” by the _____.



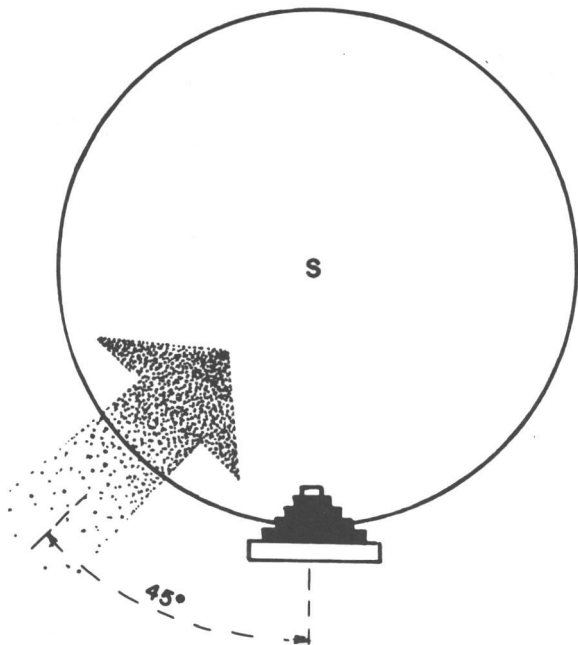
shadows

camera

For this reason, for taking pictures of three-dimensional subjects front lighting *is, is not* (underline the better answer) the most desirable lighting.

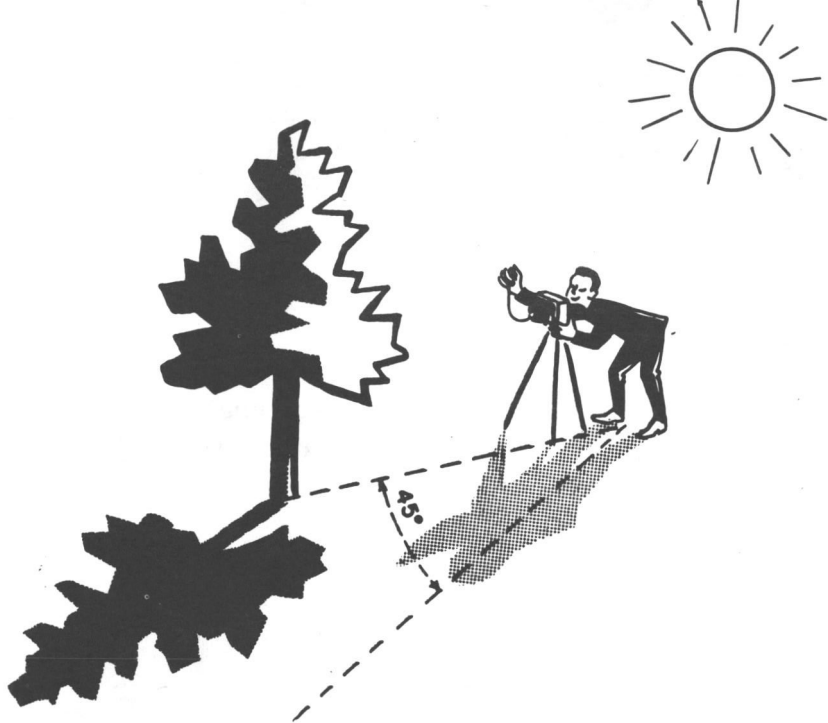
is not

Since practically all subjects have three dimensions, we should almost _____ use front lighting in photography.

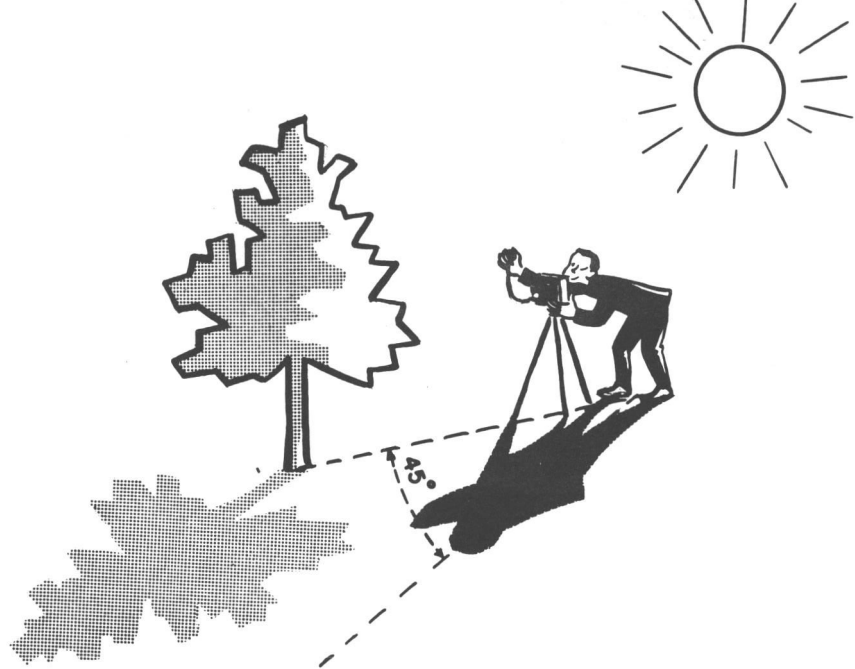


never

When the sun's rays make an angle of 45 degrees with the direction the camera is pointing, we call it ____ degree lighting.



With 45° *lighting* the sun's rays will again cast _____
of the subject. Only now the shadows can be "seen" by the
_____.

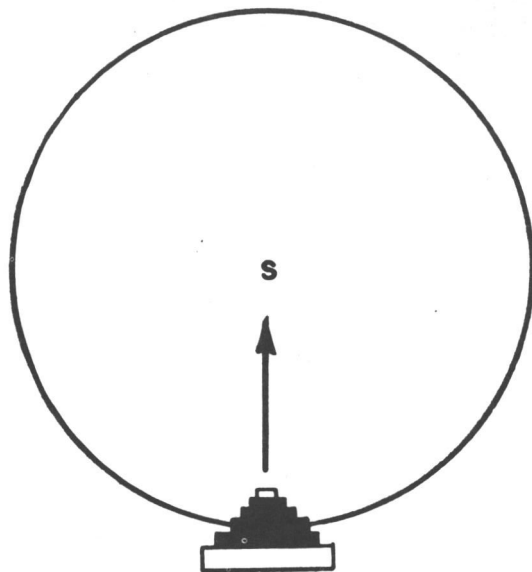




shadows

camera

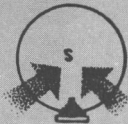
When you as the photographer cast a shadow at an angle of 45 degrees with the direction of the subject then you have ____ degree _____.



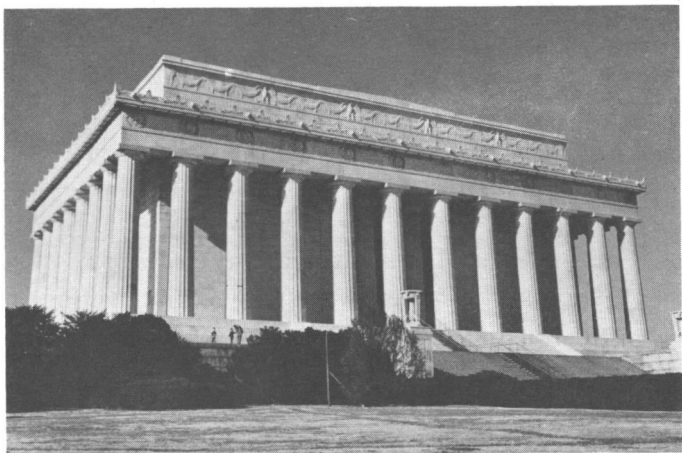
45 degree lighting

Complete this diagram to show *45 degree lighting* from both right and left of the photographer.





This picture of a swan was taken with — — lighting.
It shows that the swan has 3 dimensions. Otherwise it
could not have cast the — where it could be “seen”
by the camera.



45 degree

shadow

In this picture we can see that the columns are round because we used — — — — —.



45 degree lighting

Here again the different planes of the building show up because ————— was used to produce ————— and ————— which could be “seen” by the camera.

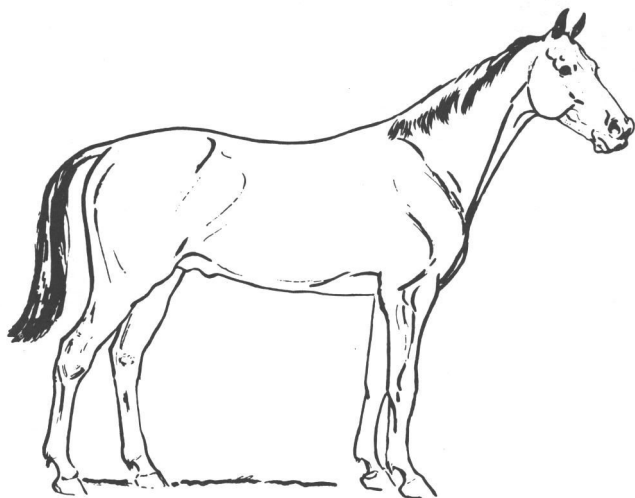


45 degree lighting

highlights and shadows

(or light and dark)

We say a picture has “*depth*” to describe its third dimension effect. This picture has _____ because the _____ lighting casts _____ from the subjects.

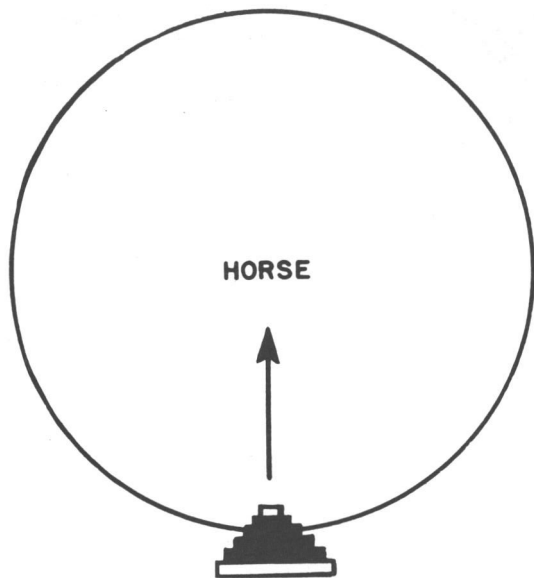


depth

45 degree

shadows

What angle of light would you strive for in taking a picture of a horse? — ———.



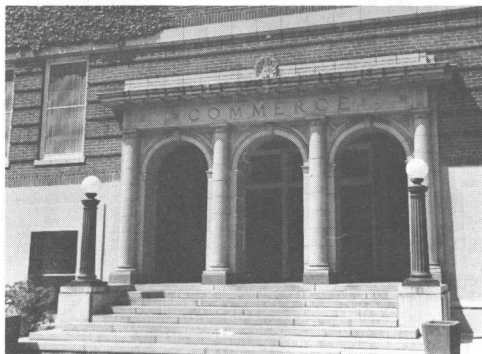
45 degrees

Sketch in the direction of the light to obtain this ____ degree lighting.

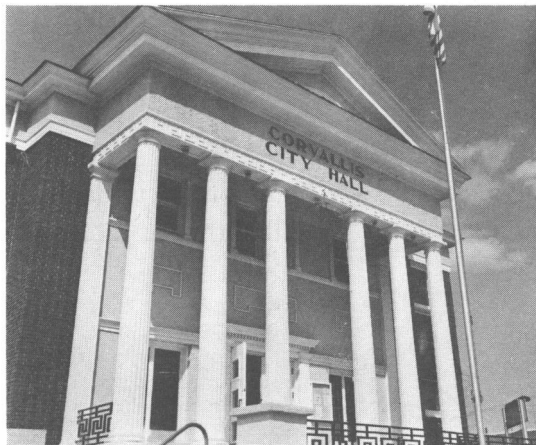


45

Since most subjects which we photograph have third dimension, it is desirable to use an angle of lighting which will show s_____s in the picture.



A

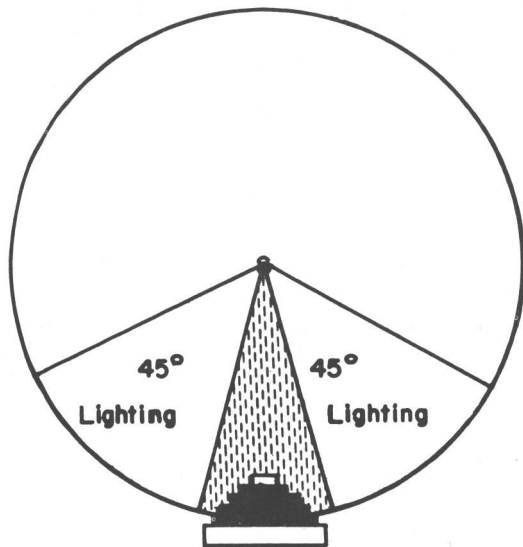


B

shadows

Study the lighting on the columns in these photographs;
then label each picture within its appropriate *angle of
lighting*.

A. — ———. B. ———.

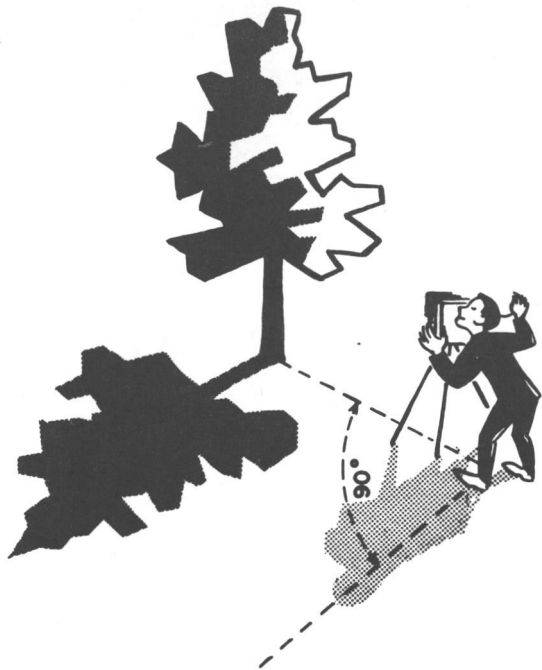


A. **45 degree**

B. **front**

Judging by this sketch does *45 degree lighting* have to be exactly 45° ?

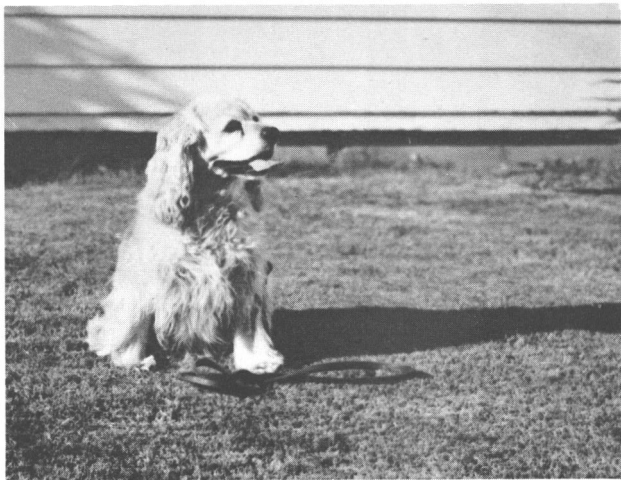
(yes or no?)





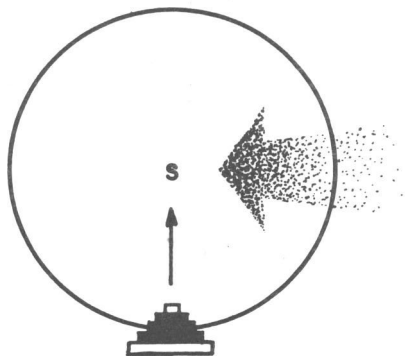
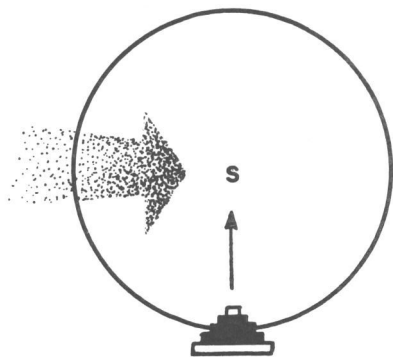
no

Arranging the lighting and camera direction so that they are at right angles to each other makes even a greater contrast between the light and shade of the subject. Sometimes this ——— lighting is even better than 45 degree lighting for showing the *shape* or *depth* in a picture.



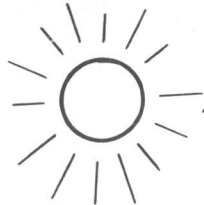
90 degree

The *shape* of this dog is evident in this picture taken with
_____.



90 degree lighting

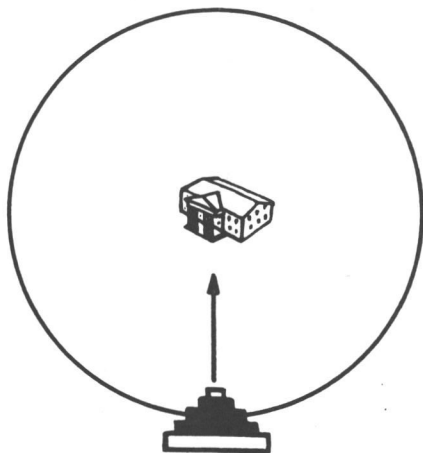
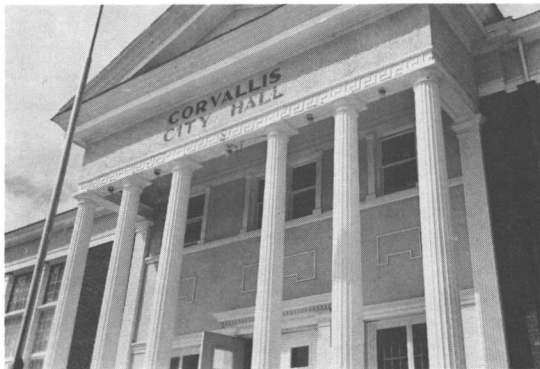
The diagram for _____ lighting will look like this. The light may come either from the right or the _____ of the photographer.



90 degree

left

When using *90 degree lighting* outdoors the photographer's shadow will lie at _____ angles to the direction of the subject.



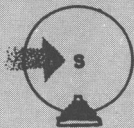
right (or 90 degree)

In this picture — — — — — lighting was used to show the
— — — — — of the columns. Complete the diagram to show the
direction of the lighting which was used.

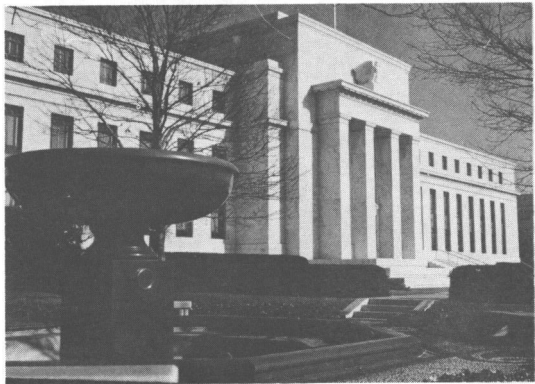


90 degree

shape



Depth can sometimes be best shown by using — ———
lighting.



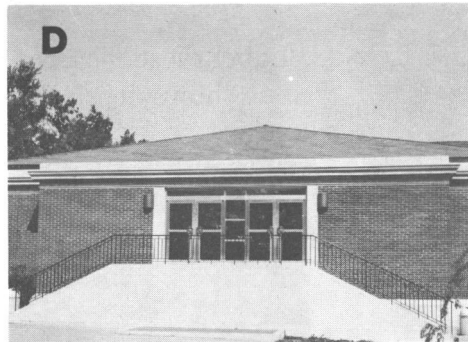
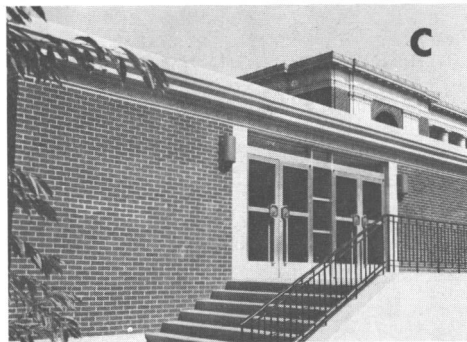
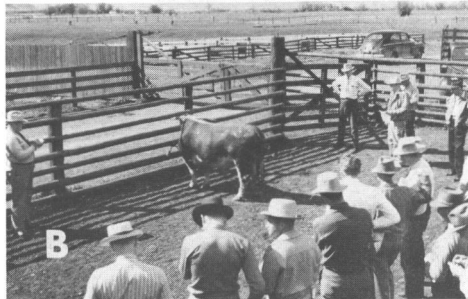
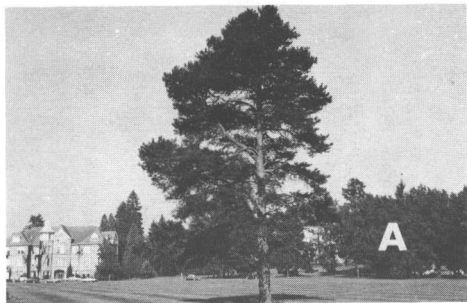
A

B



90 degree

Label these pictures with the *angle of lighting* used. Which one shows depth the better? A or B? Why?

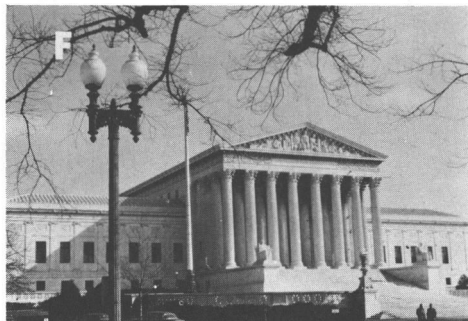


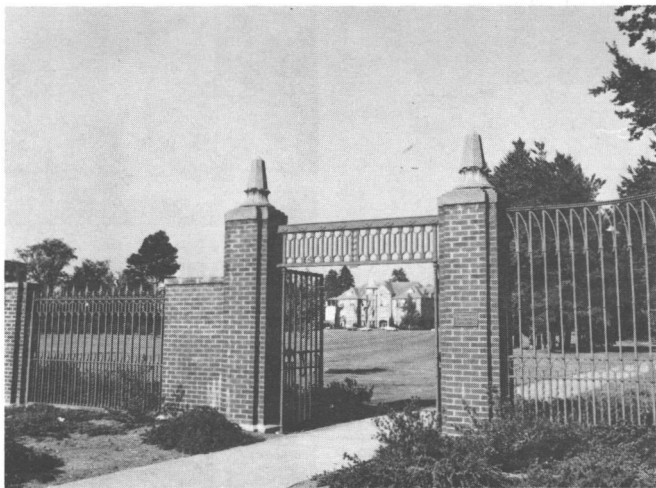
A. 90 degrees B. front

Your opinion. Perhaps A,
because shadows show
3rd dimension.



Choose the photos on these two
pages in which the lighting best
shows depth.





B, F, C

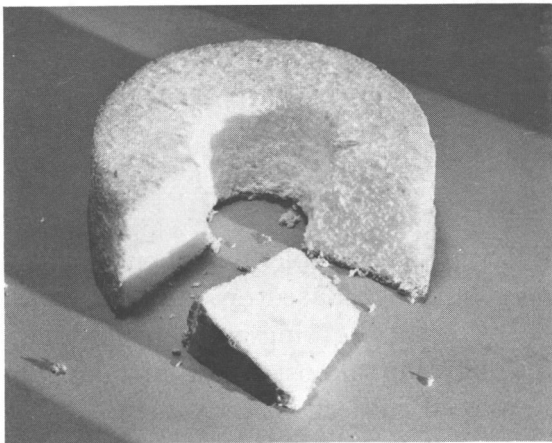
Here again *45 degree lighting* was used to show the s___e of the gate posts to give a feeling of ____ in the picture. Since 45 degree lighting usually does this well, and is easier to use, we will use 45 degree lighting *more, less* (underline better word) often than 90° lighting.

shape

depth

more

We have learned something about *front*, *45 degree*, and *90 degree* lighting. Based on what we have learned, we will use — — lighting most often, — — next, and — lighting almost never in taking pictures of three-dimensional subjects.

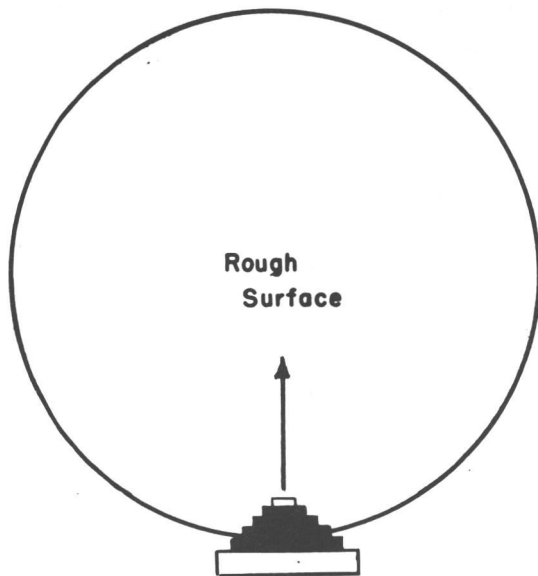


45 degree

90 degree

front

Light which just *grazes* the surface of the subject is usually ——— light. It will show the texture of rough surface because it ——— the peaks of the surface and casts ——— in the valleys.

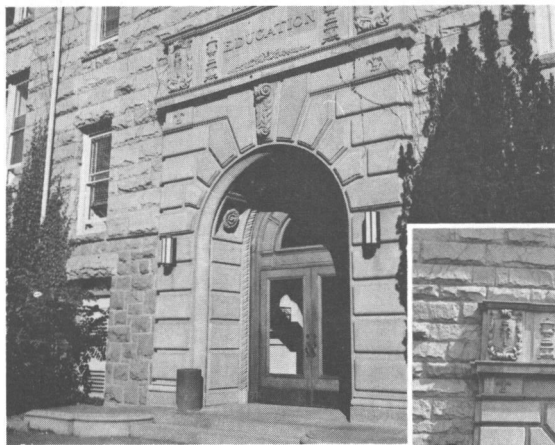


90 degree

lights

shadows

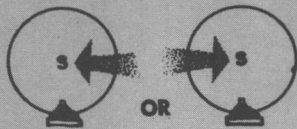
In this diagram, sketch in the direction the light should come from to produce *grazing lighting*. This grazing lighting can also be ——— lighting.



A

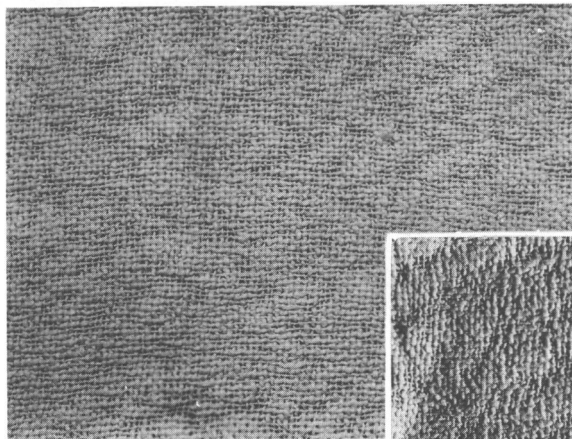
B





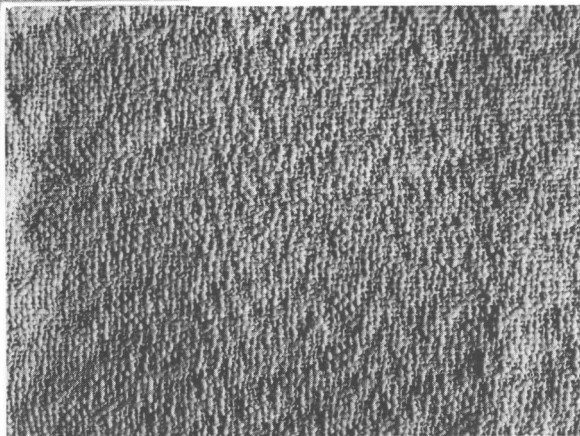
90 degree

Label these pictures with the angle of lighting used.



A. Front lighting

B. Grazing lighting



A. **0 degrees** (or **front**)

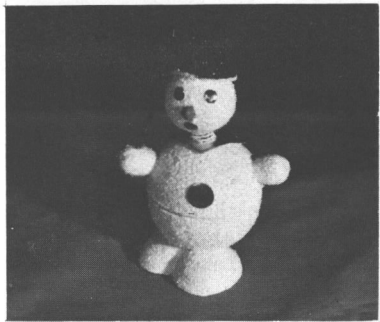
B. **90 degrees** (or **grazing**)

Which picture best shows the texture of this cloth? *A* or *B*?

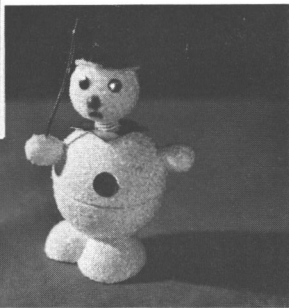


B

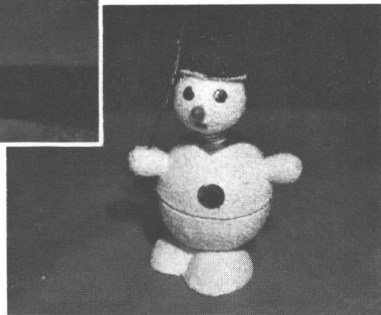
Whenever we wish to show the texture of a surface we will strive for _____ or _____ lighting.



A



B

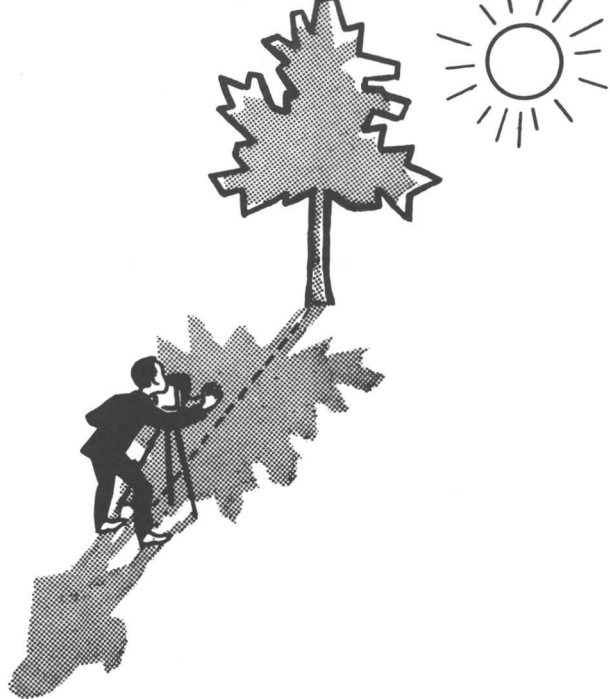


C

grazing

90 degrees

Label each photo with angle of lighting used.

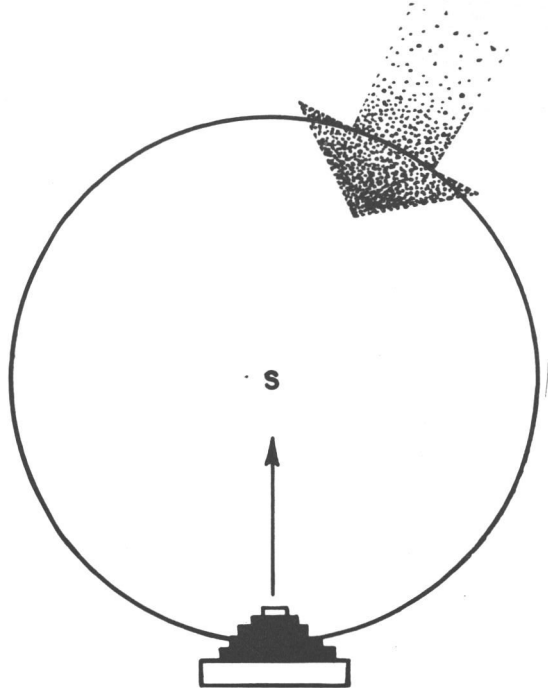


A. **45 degree**

B. **90 degree**

C. **front**

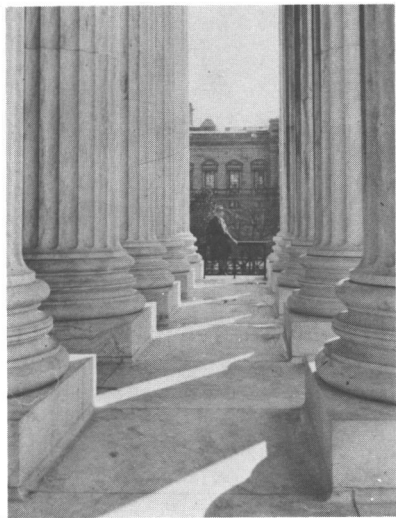
Finally, when the light comes from behind the subject we say that we have back _____.





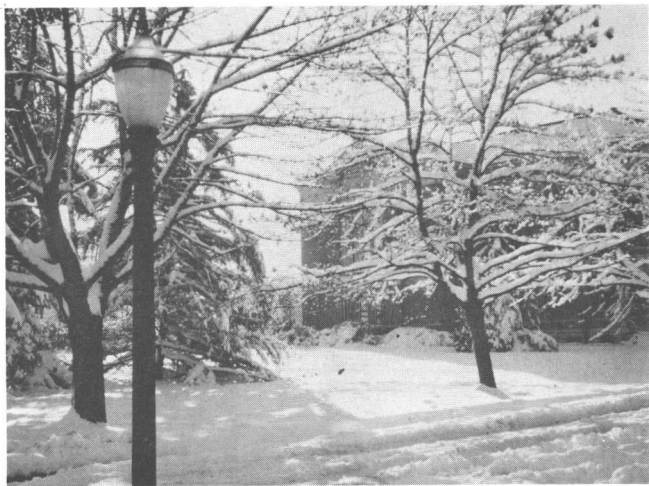
lighting

The diagram for _____ lighting will look like this. This kind of lighting is often used to get certain dramatic effects.



back

This dramatic picture was taken with _____. Notice that the effect also shows *depth* in the picture and *shape* of the columns.



back lighting

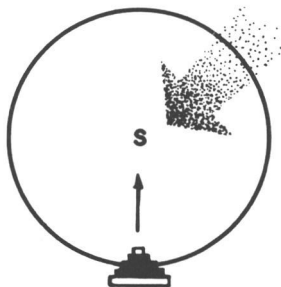
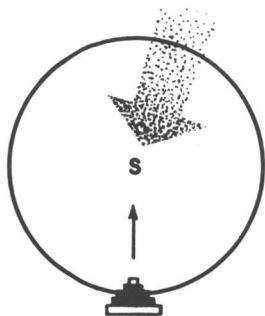
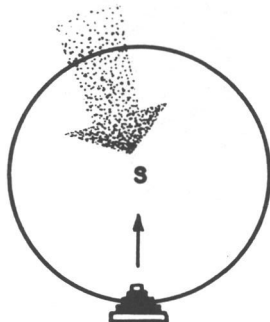
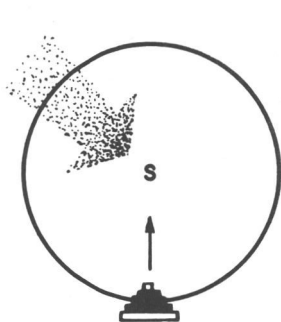
In this dramatic ____ lighted scene the camera lens was shaded from the sun's direct ____ by the tree.



back

rays (or light)

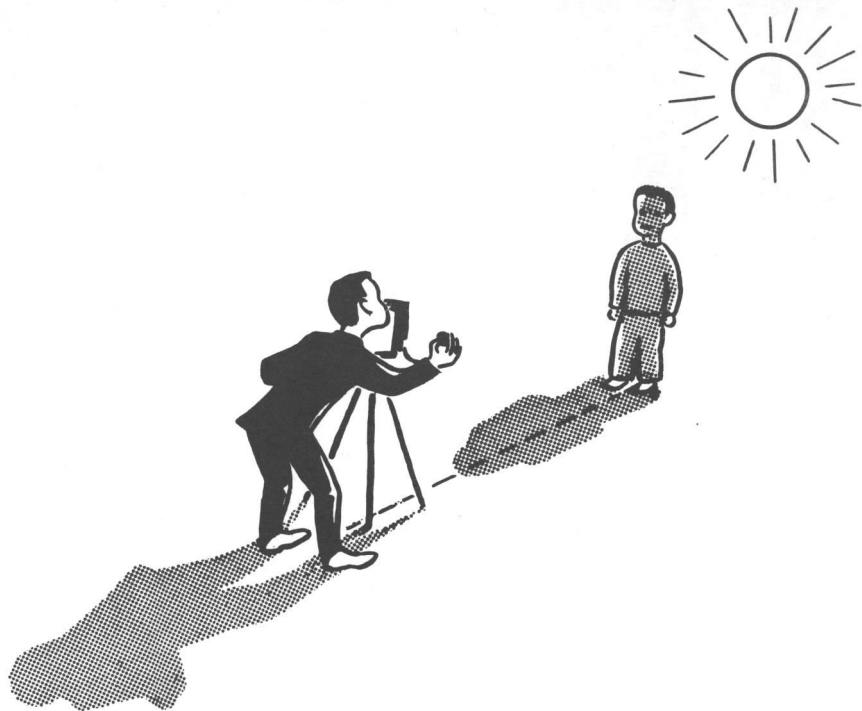
Good sunset scenes usually use _____ on the horizon to shield the camera's _____ from the direct sun's rays.



clouds

lens

Back lighting can include many angles so long as the light comes from somewhere _____ the subject. Only condition is that the _____ must be shaded from the _____.

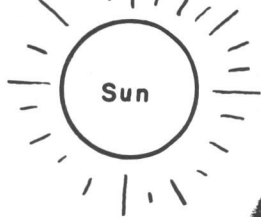


behind

camera's lens

direct sunlight

When taking pictures with *back lighting* the subject casts shadows _____ the camera, and the photographer's shadow points _____ the subject.



toward

away from

While bright sunlight is not the best type of light for taking closeups of people, we often want to get such pictures under this condition. Then it may be well to use ____ lighting so as not to cast deep _____ in the eyes or around the nose.



45 degree



90 degree



Back



back

shadows

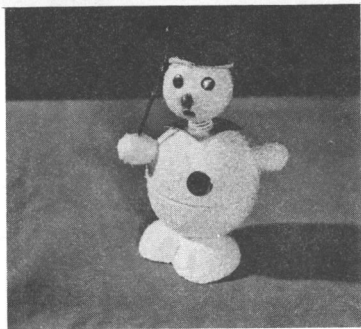
The softer light on the face thus usually results in better likenesses than when using ———— or ———— lighting.



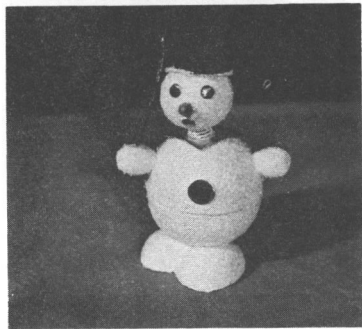
45 degree

90 degree

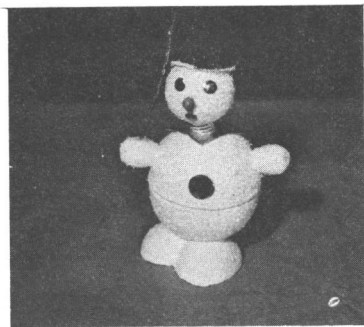
With subject lighted this way it is necessary to expose for the _____ side of the subject.



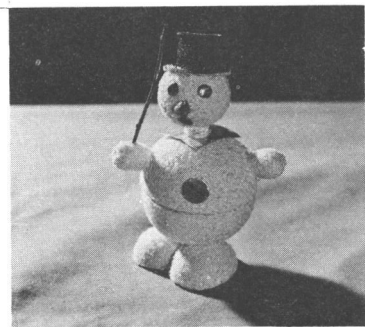
A



B



C

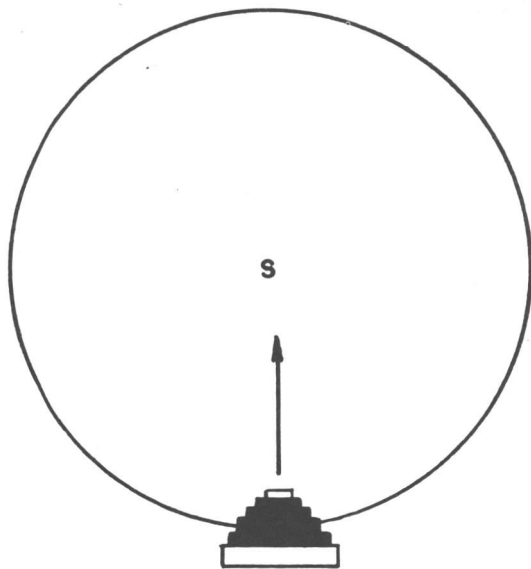


D



shaded

Label each photograph with the kind of lighting used.



- A. **90 degree**
- B. **45 degree**
- C. **front**
- D. **back**

Complete this diagram to show all four types of lighting.
Indicate general zones rather than exact angular direction.



THE LESSON you have just completed is intended to suggest general guidelines on natural lighting for photography; to make you aware of what light and shadow can do for your pictures.

It is not our intent to lay down hard and fast rules for what angle of light to use for each subject. Subjects and conditions vary too widely for us to presume to do this.

To be successful you should experiment with the lighting in each new situation. Try it from one angle, then another. A small variation in the angle may spell the difference in making or not making a great picture.

