Light and Optical Systems
Topic 4 - Lenses and Vision Practice Quiz

1. When light passing through a lens, the light is bent, causing the rays of light to diverge. The type of lens is a ...

- ○ **convex lens**
- ○ **concave lens**
- ○ **optic lens**
- ○ **diamond prism lens**

2. When light rays pass through a convex, lens the image that is formed is ...

- ○ **diverted**
- ○ **converted**
- ○ **inverted**
- ○ **implied**

3. The lens of the human eye is a convex lens. That means that when it takes in light from an object, it refracts the light rays, by focussing them on the retina. If the eye is too long, the image will form in front of the retina. This condition is called ...

- ○ **retina dysfunction**
- ○ **optical illusion**
- ○ **near-sightedness**
- ○ **far-sightedness**

4. When comparing the eye and the camera, certain parts perform the same function. The retina of the eye is similar to the part of the camera called the ...

- ○ **film**
- ○ **shutter**
- ○ **diaphragm**
- ○ **focussing ring**

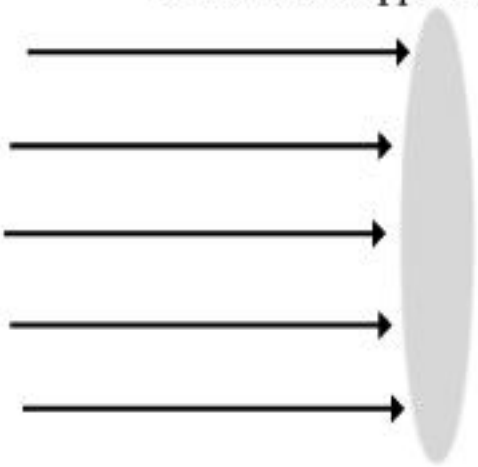
5. The aperature of a camera controls the amount of light coming into the camera, so that an clear image can be formed. This aperature opening device is similar to the pupil of the eye. It is called the ...

- ○ **iris**
- ○ **shutter**
- ○ **diaphragm**
- ○ **optic nerve**

6. Light passes through a lens and is refracted. Different lenses refract light differently. Complete the following illustrations and sentences (following each question) as directed.

Activity 1 (3 points)

Draw what happens to the light rays going through this lens.

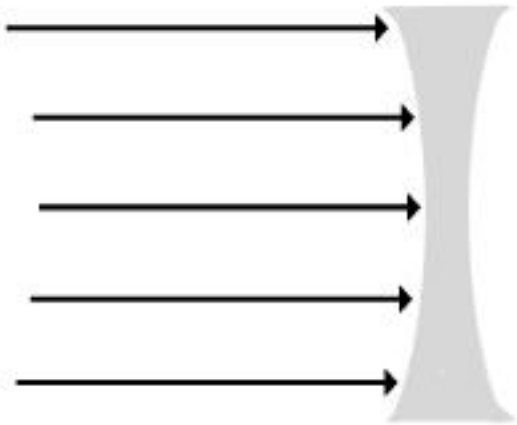


What type of lens is it? **It is a** _____ **lens.**

What happens to the light rays? **They are** _____ **.**

Activity 2 (3 Points)

Draw what happens to the light rays going through this lens.



What type of lens is it? **It is a** _____ **lens**.

What happens to the light rays? **They are** _____ **.**

Check your
Answers

Light and Optical Systems

Topic 4 - Lenses and Vision Practice Quiz (Answers)

1. When light passing through a lens, the light is bent, causing the rays of light to diverge. The type of lens is a ...

- ○ **convex lens**
- ◉ **concave lens (Text p. 208) Figure 3.29**
- ○ **optic lens**
- ○ **diamond prism lens**

2. When light rays pass through a convex, lens the image that is formed is ...

- ○ **diverted**
- ○ **converted**
- ◉ **inverted (Text p. 209) Figure 3.31**
- ○ **implied**

3. The lens of the human eye is a convex lens. That means that when it takes in light from an object, it refracts the light rays, by focussing them on the retina. If the eye is too long, the image will form in front of the retina. This condition is called ...

- ○ **retina dysfunction**
- ○ **optical illusion**
- ◉ **near-sightedness (Text p. 210) Near-sightedness is when people have trouble seeing distant objects, because the object is in focus in front of the retina and then out of focus when it reaches the retina**
- ○ **far-sightedness**

4. When comparing the eye and the camera, certain parts perform the same function. The retina of the eye is similar to the part of the camera called the ...

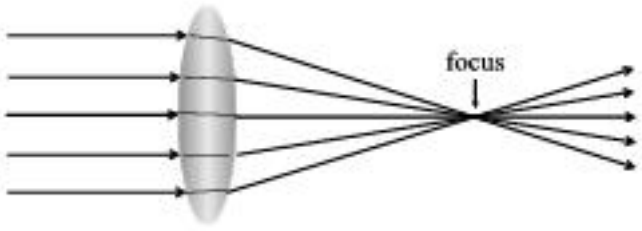
- (●) **film (Text p. 211) Figure 3.33A The film is where the image is focused**
- ( ) **shutter**
- ( ) **diaphragm**
- ( ) **focussing ring**

5. The aperature of a camera controls the amount of light coming into the camera, so that an clear image can be formed. This aperature opening device is similar to the pupil of the eye. It is called the ...

- ( ) **iris**
- ( ) **shutter**
- (●) **diaphragm (Text p. 216) Figure 3.35**
- ( ) **optic nerve**

6. Light passes through a lens and is refracted. Different lenses refract light differently. Complete the following illustrations and sentences (following each question) as directed.

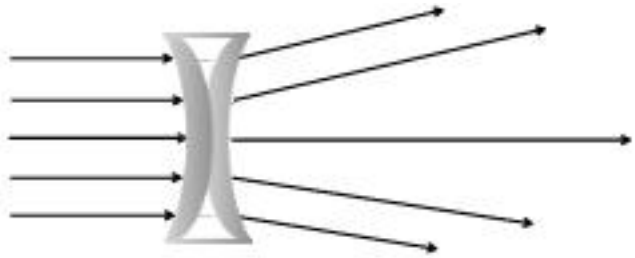
Activity 1 (3 points) **(Text p. 208)**



What type of lens is it? **It is a _____double convex_____ lens.**

What happens to the light rays? **They are _____converging (to a focal point)_____ .**

Activity 2 (3 Points) **(Text p. 208)**



What type of lens is it? **It is a _____double concave_____ lens**.

What happens to the light rays? **They are _____diverging (spreading out)_____ .**