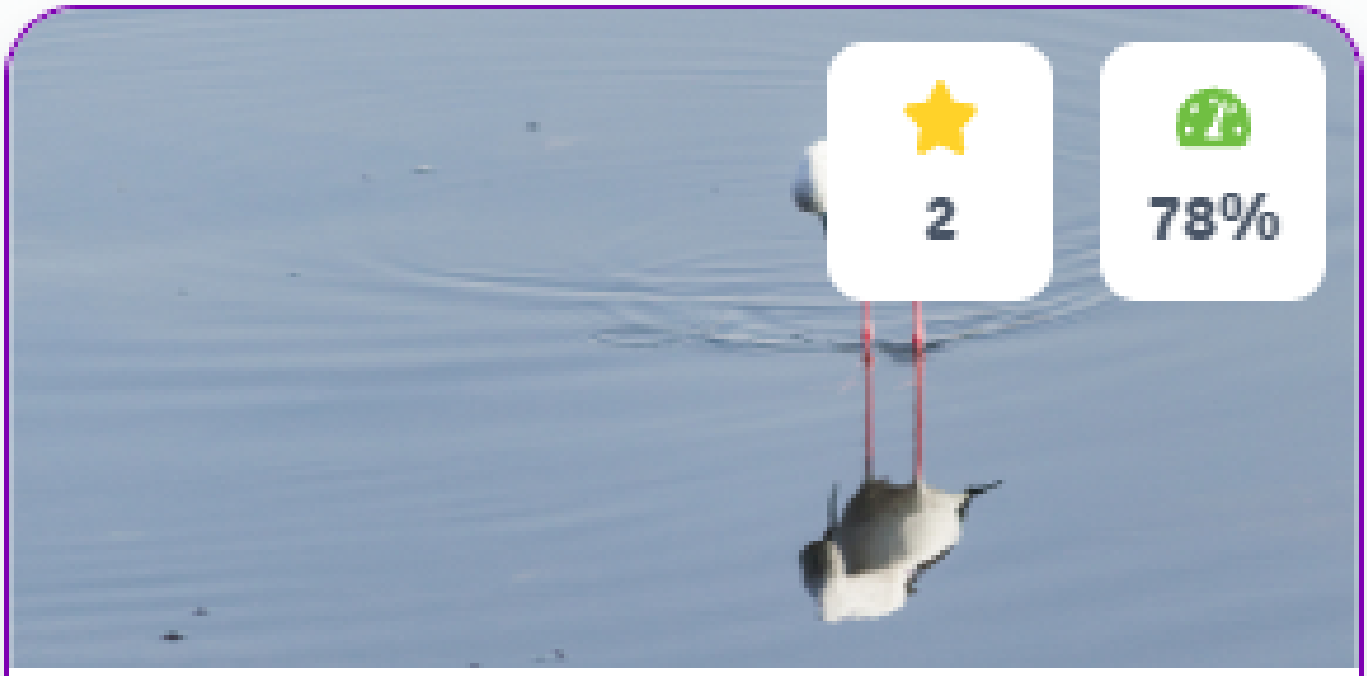
https://t.me/+yI_iw77XeiFlZTg0




Reflection and Mirrors

## 14. Reflection and Plane Mirrors: Reflection

Lesson

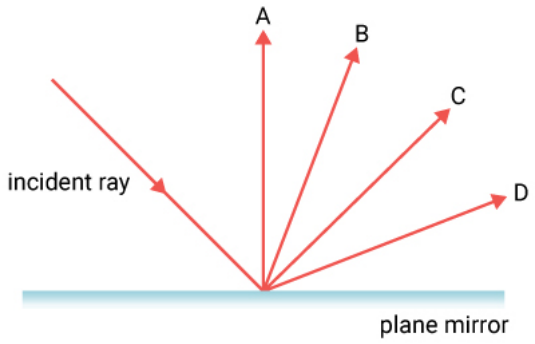
Review

View hints View feedback

Play All

## QUESTION 1

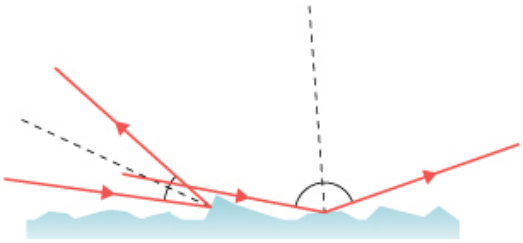
A light ray is incident on a plane mirror as shown in the diagram. Which ray best represents the reflected ray?




- B
- D
- C ✓
- A

## QUESTION 2

The image shows diffuse reflection. Diffuse reflection occurs when light reflects from an irregular ✓ surface. In the image, the incident ✓ rays are parallel, but the reflected ✓ rays are not parallel.



## QUESTION 3

Drag and drop the steps the student should follow into the correct order.

A student is drawing a reflected ray on a drawing that shows an incident wavefront striking a boundary.

Step 1: incident ray at 90° to the wavefront ✓

Step 2: normal line at 90° to the boundary. ✓

Step 3: measure and label $\theta_i$ to the normal ✓

Step 4: measure and label $\theta_r$ to the normal ✓

$\theta_r$ is measured to the mirror

$\theta_i$ is measured to the mirror

incident ray at 90° to the normal

## QUESTION 4

Drag and drop the labels for the planes onto the image.

plane of travel ✓

plane of refraction

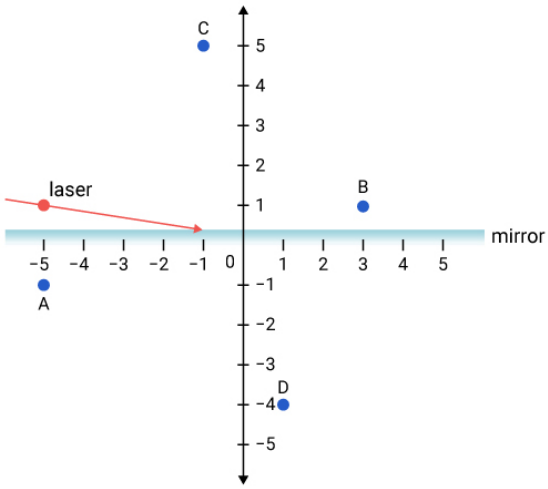
plane of reflection

plane of wavefront

plane of scattering

## QUESTION 5

An incident ray travels through point $(-5, 1)$ and reflects from the mirror at point $(-1, 0)$. Which point, A, B, C, or D, will the reflected ray pass through?




- (●) B ✓
- ( ) D

- C
- A

## QUESTION 6

Which statements apply to specular reflection?

- [ ] Light is emitted by the surface.
- [ ] Light reflects off an irregular surface.
- [x] The reflecting surface is smooth. ✓
- [x] Parallel incident light rays are reflected parallel. ✓
- [ ] It only occurs with opaque surfaces.
- [ ] Light is scattered in different directions.

## QUESTION 7

How are angles of incidence and reflection related in the law of reflection?

- (•) The angles of incidence and reflection are equal. ✓
- ( ) The angles of incidence and reflection are inverse.
- ( ) The angles of incidence and reflection are supplementary.
- ( ) The angles of incidence and reflection are complementary.

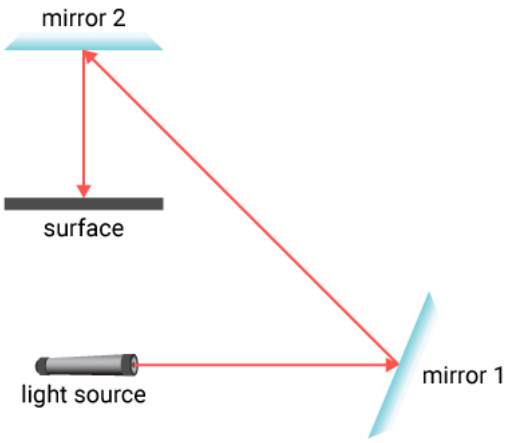
## QUESTION 8

Reflection takes place when a wavefront bounces off a surface. The angle of reflection is equal to the angle of incidence.

## QUESTION 9

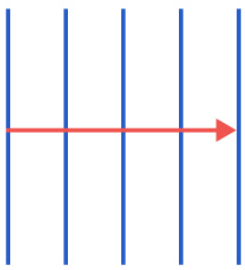
Select the correct answers from the drop-down menus to complete the sentence.

A student draws a way for light to travel from a source to a surface using flat mirrors. The student drawing is incorrect at mirror 2 because the angle of reflection is not equal to the angle of incidence.




## QUESTION 10

A light wave is shown in the image. What does each blue line represent? Select all that applies.



- [ ] wavelength
- [ ]

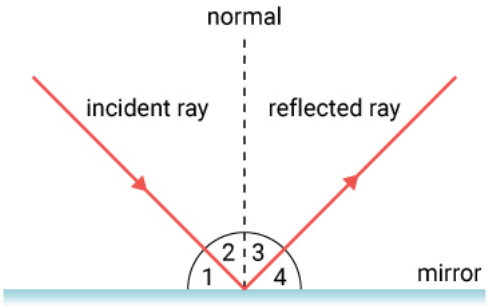
- [ ] plane of travel
- [ ] light ray
- [ ] normal
- [x] imaginary surface ✓
- [x] wavefront ✓

## QUESTION 11

Specular reflection occurs when light strikes a smooth ✓ surface. An example of specular reflection is light bouncing off a mirror ✓.

## QUESTION 12

Each arc in the image is labeled with a number. Which arc indicates the angle of incidence?




- [ ] 3
- [ ] 4
- [ ] 1
- [x] 2 ✓

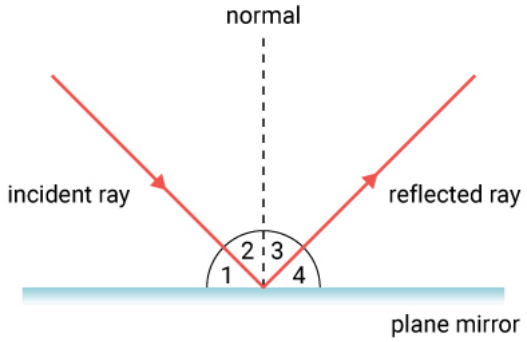
## QUESTION 13

A diagram of reflection shows an angle of incidence and an angle of reflection. The angles are measured in reference to the normal.

The normal is an imaginary line that is 90° to the surface.

## QUESTION 14

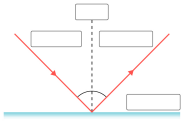
Each arc in the image is labeled with a number. Which arc indicates the angle of reflection?




- 2
- 4
- 1
- 3 ✓

## QUESTION 15

Drag and drop the correct label for each line and surface.

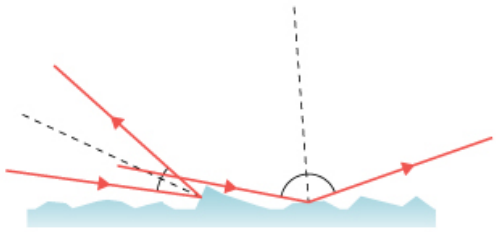


normal ✓

refracted ray | imaginary surface | transmitted ray | plane of travel | ref

## QUESTION 16

The image shows two incident rays and two reflected rays. Choose the correct statement.



- The reflected rays are not parallel because the surface is smooth, so this is a specular reflection.
- The reflected rays are parallel because the surface is rough, so this is a diffuse reflection.
- The incident rays reflect in the same way, so this is a specular reflection.
- ✓ The reflected rays are not parallel because the surface is rough, so this is a diffuse reflection.

## QUESTION 17

A ray of light strikes a plane mirror at an angle of incidence equal to 35°. What is the angle between the incident ray and the reflected ray?

- 35°
- ✓ 70°
- 0°
- 55°

## QUESTION 18

Reflection occurs when a light ray meets and bounces off a surface. The ray that approaches the surface is the incident ray. The ray that bounces off the surface is the reflected ray. Depending on how smooth and polished the surface is, there are two types of reflection; specular and diffuse .

## QUESTION 19

You cannot see the sky reflected in this balloon because light is scattered by the balloon. This is called diffuse reflection.



## QUESTION 20

A ray of light traveling in air strikes a plane mirror at an angle of 60° with its surface. What is the angle of reflection for this light ray?

- 90°
- 60°
- 15°
- 30° ✓