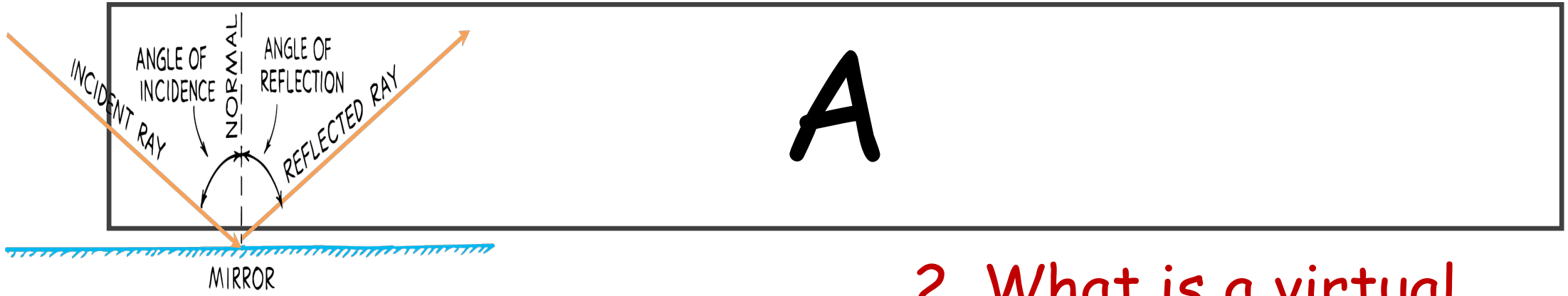


A

1. What is the Law of Reflection:

Claim:

The Law of Reflection states that the angle of incidence is equal to the angle of reflection.

Evidence: page 580

2. What is a virtual image? What is a real image?

Claim:

Virtual image- appears behind the surface of reflection.

Real image- appears in front of the surface of reflection.

Evidence: page 581, 605

A

3. What kind of image do plane (flat) mirrors produce:

Claim:

Virtual image- because the image originates from a location where light doesn't actually reach.

(i.e. if you're standing 2 feet in front of a mirror your image is 2 feet behind the mirror).

Evidence: page 581

4. Define diffuse reflection.

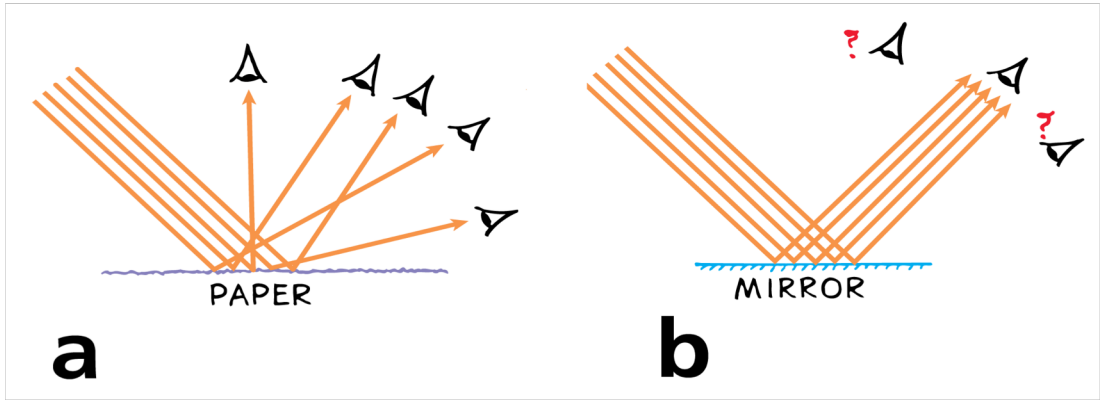
Claim:

When the surface bumps are large compared to the waves, they will bounce randomly instead of predictably.

Evidence: page 582

A

5. Draw an example of diffuse reflection on a rough(a) and smooth surface(b).



Evidence: page 583, figure 29.9

6. What do we mean by rough surface? Explain a situation where we want a rough surface for waves to bounce.

Claim:

When the waves are much smaller than the surface bumps.

A rough surface helps us read and see things.

Evidence: page 583

A

7. What do we mean by smooth surface? Explain a situation where we want a smooth surface for waves to bounce.

Claim:

When the surface bumps are much smaller than the waves

Smooth surface are useful in mirrors.

Evidence: page 583

8. Explain total internal reflection.

Claim:

At extreme angles when a wave will continually be reflected back into a medium. Farther than the critical angle causes total internal reflection

(i.e. total internal reflection gives diamonds their bright sparkle)

Evidence: page 583

A

9. Define critical angle. (demo)

Claim:

At the critical angle a wave wont cross a boundary anymore, but refract along the surface.

Book definition: The angle of incidence that causes the ray to be refracted parallel to the boundary.

Evidence: page 594