

Mathematics Engineering Science Achievement (MESA) - Period 5, Nathan Balasubramanian (Mr. Bala), Room 506

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Discussion Topic

*Students should know and be able to measure quantities associated with energy forms and identify different forms of energy (e.g. light), and quantify energy forms (e.g. measure angles of incidence and reflection when laser light bounces off a mirror) (Standard 2.2.a.1 and 2.2.a.2 in the Colorado Science Assessment Frameworks)

Now that you have spent the past few weeks experimenting with lasers, explain in your own words, the meaning of the vocabulary words you've learned (Each word carries a maximum of two points).

- 1. Reflection
2. Angle
3. Normal
4. Angle of reflection
5. Vertex
6. Angle of incidence
7. Reflected ray
8. Ray
9. Incident ray
10. Bouncing off
11. Protractor
12. LASER
13. Irregular reflection
14. Diffuse reflection
15. Regular reflection
16. Specular reflection
17. Center of curvature
18. Radius of curvature
19. Focus
20. Focal length

Write down one use you might think of, for reflections produced by a curved mirror.

Created By Nathan Balasubramanian 09/26/05 08:30AM

Messages

Bryan D. Posted 09/26/05 09:29AM

- 1. Bouncing off
2. The degree (10, 20, etc.) that the laser or something else hits the mirror.
3. Where the laser hits the mirror, you put or imagine a line (labeled at 90 degrees on a protractor). That line is called the normal.
4. The angle that the light reflects at.
5. The place where the light and the reflected light meet on the mirror.
6. The angle of the reflected ray and the ray.
7. The reflected light.
8. The light that has not hit the mirror yet.
9. The reflected ray AND the ray.
10. Reflection.
11. A device that has degrees labeled on it.
12. Light Adaptation Straight Energy Radiation
13. The reflected light that bounces off an irregular surface (usually a curved surface).
14. The reflected light that bounces off a regular surface (usually a flat surface).
15. The reflected light that bounces off a regular surface (usually a flat surface).
16. The reflected light that bounces off a regular surface (usually a flat surface).
17. The center of an irregular surface.
18. The radius of an irregular surface.
19. The center of a regular surface.
20. The length of a regular surface.
With one curved mirror and one laser, you could make a TON of lasers.

Andrew S. Posted 09/26/05 09:30AM

- 1. bouncing off
2. a measurement between 2 connected points
3. a straightline betweenan angle
4. the outgoing line
5.
6. the ingoing line
7. light thats bouncing off
8. light
9.

Jason P. Posted 09/26/05 09:35AM

- 1.bouncing off
2.the degrees in wich the laser bounces off
3.a horizontal line in wich the laser first hits
4.7
5.7
6.angle of the reflective ray
7.the light reflecting
8.7
9.the ray
10.angle
11.a tool thats used to check degrees
12.light
13.light that bounces off a curved surface
15.light bouncing of a flat surface

Jason P. Posted 09/26/05 09:40AM

- 16.?
17.?
18.?
19.?
20.?

Erin K. Posted 09/26/05 09:47AM

- 1. Reflection- When you yourself in a mirror or on a shiny surface.
2. Angle- The number of degrees between 2 points.
3. Normal- A line that is perpendicular to the surface and is 0 degrees or 90 degrees, depending on how you use it.
4. Angle of reflection- The angle at which the reflection will bounce off.
5. Vertex-That is where the incident ray and the reflected ray meet.
6. Angle of incidence- The angle between the incidence ray and the normal.
7. Reflected ray-The ray that is reflected off a shiny surface.
8. Ray- A beam of light that comes from the laser.
9. Incident ray- A line that represents a beam of light.
10. Bouncing off- Is when light hits a shiny surface and comes back.
11. Protractor- A tool used an angle.
12. LASER- Light Amplification by Stimulated Emission of Radiation
13. Irregular reflection- When light bounces off in numerous directions for a parallele beam.
14. Diffuse reflection- The same as an irregular reflection.
15. Regular reflection- The reflected light that bounces off a regular surface.
16. Specular reflection- When light bounces off in many directions.
17. Center of curvature-The exact center of the circle.
18. Radius of curvature- The center of a circle to the outside edge.
19. Focus-The center of a regular surface.
20. Focal length-The length of a regular surface

April A. Posted 09/26/05 09:47AM

- 1. Reflection- When you see yourself or another object on a shiny surface.
2. Angle- The number of degrees between 2 points.
3. Normal- A line that is perpendicular to surface and is at 0 degrees or 90
4. Angle of reflection- The angle at which the reflection bounces off.
5. Vertex- Where the incidence ray and the reflected ray meet
6. Angle of incidence-The angle between the incidence ray and the normal
7. Reflected ray- A ray that is reflected off of a shiny surface
8. Ray- A beam of light that is shown and comes from the laser.
9. Incidence ray- A line that represents a laser ray and a beam of light.
10. Bouncing off- When an object reflects off a shiny surface.
11. Protractor- The tool you use to measure an angle
12. Laser- Light Amplification by Stimulated Emission of Radiation
13. Irregular reflection- When light bounces off in numerous directions for a paralel beam
14. Diffuse reflection- The same thing as an irregular reflection.
15. Regular reflection- The reflected light that bounces off a regular surface.
16. Specular reflection- When light bounces off in many directions
17. Center of curvature- The exact center of a circle.
18. Radius of curvature- The center of a circle to the outside edge.
19. Focus- The center of a regular surface.
20. Focal length- The length of a regular surface.

Erin K. Posted 09/26/05 09:50AM

One use for reflections produced by a curved mirror would be: more light would speed around you

April A. Posted 09/26/05 09:54AM

One use for reflections produced by a curved mirror: You could use it in a stadium to create more light. So that they can bounce the lights off the walls.

Adrian E. Posted 09/26/05 09:58AM

reflection is something you see on the other side of the mirror
angle is something that you are mesuring by the side.
normal is the invisible line going in a 90 degree angle
angle of reflection is the reflection of the angle its shooting.
vertex is probably the protractor
angle of incidence is the ray that its pointing at .
reflected ray is the opeset of angle of incidence.
ray is the laser.
icident ray is the angle between the normal and theangle of incidence.
bouncing off is the the reflected ray.
the protractor mesurs angles.
laser is the thing that pints at stuff.
irregular reflection is not regular.
diffuse reflection is the reflection on the right.
regular reflection is the reflection on the left.
specular reflection is the mirror.
center of curvature is the normal.
radius of curviture is the center of the cicle.
focus is the angles.
focal length is the length of the mirror.

Sarah H. Posted 09/26/05 09:58AM

sorry about numbers 1-10 they sort of erased I have witnesses.
11. protractor= a tool that you use to measur angles
12. laser= light amplification by stimulated emission of reflection
13.irregular reflection= when light bounces off in numerous directions for a paralell beam
14.diffuse reflection= an other word for irregular reflection
15.regular reflection= a reflection of light that bounces off a flat surface
16.specular reflection= a reflection of light that bounces off in many directions (of you shine light on a diamond)
17.center of curvature= the exact center of a circle
18. radius of curvature= the lenth of a curve
19.focus=center of a regular surface
20.focal lenth= the length of focus
You can use then to make a light on a car stronger.

Jasna H. Posted 09/26/05 09:58AM

- 1-you see yourself in a mirror.
2- the number of degrees frm 1 point to the other
3- a stright line that goes 90 degrees on a regular protractor
4- the angle between the reflectat ray and and the normal
5- incidence and reflection rays meet
6- angle between the angle of incidence and the ray
7- a line that shows how a beam of light bounces off a mirror
8- a beam of light that is shown and comes from the laser
9- a line that represents a laser ray and a beam of light
10-when an object reflectants shiny surface
11 the tool you use for measuring the angles
12 light amplification by stimulated emission of reflection
13 it's when light bounces off in numerous directions for a paralel beam
14 it's the same as irregular reflection
15 it's what light bounces off in regular surfaces like flat surfaces.
16 when light bounces off in many diractons
17 the exact center of a circle
18 the center of a circle outside of the edge
19 center of a regular surface
20 length of a regular surfaces and the length of focus

yes Sarah's 1-10 answers got erased.
You could see yourself upside down

Harutyun P. Posted 09/26/05 10:09AM

- 1. Bouncing off
2.ameasurmet in between two differenet rays
3.the front of a mirror[ainvisible line coming out perfectly straight]
4.what angle is the light going to reflect
5.where the light comes from and where it reflects
6.the angle in which the ray comes
7.the ray that has been bouced of
8.light going one way
9.the ray and the reflected ray
10.reflecting
11. an object used to measure angles
12.Light,Adaption,Straight,Energy,Radeation
13.a ray that bouced of a curved angles
14.same as irregular reflection
15.a strait reflection
16.a way of reflection in witch the ray bouces of in more than one derection
17.where the reflectionturns
18.the dagrees in witch a ray reflects
19.making the ray straight
20.the strength of the lazer

Joshua Seth P. Posted 09/28/05 09:17AM

- 1. Reflection- When you see yourself or another object on a shiny surface.
2. Angle- The number of degrees between 2 points.
3. Normal- A line that is perpendicular to surface and is at 0 degrees or 90
4. Angle of reflection- The angle at which the reflection bounces off.
5. Vertex- Where the incidence ray and the reflected ray meet
6. Angle of incidence-The angle between the incidence ray and the normal
7. Reflected ray- A ray that is reflected off of a shiny surface
8. Ray- A beam of light that is shown and comes from the laser.
9. Incidence ray- A line that represents a laser ray and a beam of light.
10. Bouncing off- When an object reflects off a shiny surface.
11. Protractor- The tool you use to measure an angle
12. Laser- Light Amplification by Stimulated Emission of Radiation
13. a ray that bouced of a curved angles
14.same as irregular reflection
15.a strait reflection
17.center of curvature= the exact center of a circle
18. radius of curvature= the lenth of a curve
20. The length of a regular surface.
With one curved mirror and one laser, you could make a TON of lasers.

Hunter H. Posted 09/28/05 09:19AM

- 1. bouncing off of something
2.a line that is bent a certain way
3.a line that is 90 degrees on the front of a mirror
4.the angle that the light reflects into
5.where the incident and reflection rays meet
6. the angle between the incidence and ray
7.the ray that was reflected
8.a light beam heading one direction
9.a line that represents a laser
10. a diferent way to say reflection.
11.a tool used for measuring angles
12.light application by strait emmission of radiation
13.a disortorted reflection
14.the same thing
15.a normal reflection
16.a reflection that can bounce in many different directions
17.the center of acircle
18.the length of a curve
19.the center of a regular surface
20.the length of a regular surface
you could see yourself in different ways

Alahna N. Posted 09/28/05 09:25AM

- 1.bouncing off
2.measurement between 2 different rays
3.where the laser hits the mirror
4.the angle that the light reflects
5.the vertex is where the light is coming from and where its going to reflect
6.the angle between the incident ray and the normal
7.the ray thats being reflected
8.Ray- the light thats going 1 way
9. Incident ray- line that is representing a laser ray and a beam of light
10. Bouncing off- reflection
11. Protractor-a tool used for measuring angles
12. LASER-light amplification by stimulated emission of refelction
13. Irregular reflection-rays that bounce off of a curved angle
14. Diffuse reflection-a diffused reflection is the same as an irregular reflection
15. Regular reflection-reflection that is straight
16. Specular reflection-the exact same as a regular reflection
17. Center of curvature-the exact center of a circle
18. Radius of curvature-center of a circle to the outside edge
19. Focus- making the ray straight
20. Focal length-srength of a laser

Elias W. Posted 09/28/05 09:26AM

- 1. Reflection
Bouncing off
2. Angle
I don't know
3. Normal
a line in the middle of an angle
4. Angle of reflection
the angle of which light is coming from
5. Vertex
were the reflected and incident ray meet
6. Angle of incidence
7. Reflected ray
8. Ray
9. Incident ray
10. Bouncing off
11. Protractor
a tool that you measure angl with
12. LASER
laser= light amplification by stimulated emission of reflection
13. Irregular reflection
not a regular reflection
14. Diffuse reflection
the outgoing reflection
15. Regular reflection
the normal reflection 10 in 10 out
16. Specular reflection
when the light or laser bounces in many ways
17. Center of curvature
the center of curved mirror
18. Radius of curvature
it is the length of one of the curved sides
19. Focus
the main thing
20. Focal length
the length of how far the laser can travel

Cody C. Posted 09/28/05 09:26AM

- 1.bouncing off.
2.the direction of which the beam of light is reflecting off of something.
3.a line that is perpendicular to the surface that is at 0 degrees.
4.the angle of which the reflection is going after it is bounced off.
5.where the incident ray and the reflected ray meet.
6.the angle between the incident ray and the normal.
7.a ray that is reflected off a surface.
8.a beam of light that is shown and comes fromthe laser.

Anthony H. Posted 09/28/05 09:26AM

- 1. bouncing off
2. angle number of degress between two points
3. a line that in 90 deges going to reflect.
4. what angle a light is going to reflect.
5. incidence of refetion rays meet.
6. Angle of incidence-The angle between the incidence ray and the normal.
7. Reflected ray-the ray that has been bounced of
8. Ray- light going one way.
9. Incident ray-a line that represents a laser ray and a beam of light
10. Bouncing off- a reflection of light hitting a mirror
11. Protractor- a insterment to measer degers
12. LASER-Light,Addaption,Straight,Energy,Radeation
13. Irregular reflection's- when light bounces off in numerous diractons for a paralel beam.
14. Diffuse reflection- a reflected beam that goes no were.
15. Regular reflection-a reflection of light that bounces off a flat surface
16. Specular reflection-When light bounces off in many directions
17. Center of curvature-where the reflectionturns
18. Radius of curvature-the center of a circle outside of the edge
19. Focus-The center of a regular surface.
20. Focal length-the strength of the lazer.

Write down one use you might think of, for reflections produced by a curved mirror.- in space when you are upside down you will be right sidup.

Ryan S. Posted 09/28/05 09:26AM

- 1. Bouncing off.
2. The degree where the lazer light bounce off.
3. A line that goes 90degree angel on a protractor.
4. The angel which the lazer will reflect at.
5. The place where the light and the reflected light meet on the mirror
6. The angle between the incident ray and the normal.
7. The ray that has been bounced off the mirror.
8. The light that came from the lazer.
9. They ray and the reflected ray.

Christina G. Posted 09/28/05 09:27AM

- 1 you are able to reflect on shiny objects
2 angle from point to point
3 original laser beam
4 angle of which a angle reflects
5 the light comes and reflects
6 angle between an incident ray
7 a ray that is reflect of a shiny mirror
8 a beam of light
9 a line that represents a laser
10 a ray bounces of a shiny surface
11 an instrument to measure a degrees
12 a beam of light
13 bouncing of curved angles
14 non regular reflection
15 strait reflection
16 a way in reflection that bounces off the other way
17 exact center of a circle
18 lengh of curve
19 center of

Lucas R. Posted 10/11/05 09:15PM

- 1. Reflection
Bouncing off
2. Angle
something that is between two places
3. Normal
the virtual line that is caled normal becous it is the normal line
4. Angle of reflection
whangle the light is going to reflect or off
5. Vertex
where the incident ray get contact or meets
6. Angle of incidence
the angle where the light comes in
7. Reflected ray
the ray that is reflected off the mirror
8. Ray
the laser
9. Incident ray
the ray that is going in to the mirror
10. Bouncing off
reflection
11. Protractor
a tool that you measure angl with
12. LASER
laser= light amplification by stimulated emission of reflection
13. Irregular reflection
not a regular reflection
14. Diffuse reflection
the outgoing reflection
15. Regular reflection
the normal reflection 10 in 10 out
16. Specular reflection
when the light or laser bounces in many ways
17. Center of curvature
the center of curved mirror
18. Radius of curvature
it is the length of one of the curved sides
19. Focus
the main thing
20. Focal length
the length of how far the laser can travel

Tynan C. Posted 10/16/05 09:10PM

- 1-bouncing off
2-angle is a degree in which two rays are going out at a different direction
3-a normal is a perpendicular line going straight out of the base of an angle
4-an angle in which the laser bounces off a mirror
5-the base point of an angle
6-7
7-the out going ray of the angle
8-the line going out of the vertex
9-the incoming ray
10-the results of shining a laser on a mirror
11-a tool to help you measure angles
12-a device that shines a level in multiple rays
13-when light bounces off in many rays
14-same as irregular reflection
15-a ray of light that bounces off regularly
16-when light bounces off in many directions
17-exact center of a circle
18-center of the outside edge of a circle
19-center of a regular surface
20-length of a regular surface

Cody C. Posted 10/20/05 09:37AM

- 1. Reflection- When you yourself in a mirror or on a shiny surface.
2. Angle- The number of degrees between 2 points.
3. Normal- A line that is perpendicular to the surface and is 0 degrees or 90 degrees, depending on how you use it.
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5. Vertex-That is where the incident ray and the reflected ray meet.
6. Angle of incidence- The angle between the incidence ray and the normal.
7. Reflected ray-The ray that is reflected off a shiny surface.
8. Ray- A beam of light that comes from the laser.
9. Incident ray- A line that represents a beam of light.
10. Bouncing off- Is when light hits a shiny surface and comes back.
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15. Regular reflection- The reflected light that bounces off a regular surface.
16. Specular reflection- When light bounces off in many directions.
17. Center of curvature- The exact center of the circle.
18. Radius of curvature- The center of a circle to the outside edge.
19. Focus-The center of a regular surface.
20. Focal length-The length of a regular surface

Jason P. Posted 10/21/05 09:45AM

- 1.bouncing off
2.the degrees in wich the laser bounces off
3.a horizontal line in wich the laser first hits
4.the angle in wich the laser bounces off the mirror
5.where the incident ray and the reflective ray meet
6.angle of the reflective ray
7.the light reflecting
8.the lasers beam of light
9.the ray
10.angles
11.a tool thats used to check degrees
12.light that bounces off a curved surface
13.light that bounces off a curved surface
14.light that bounces off a flat surface
15.light bouncing off in different directions
17.the center of a circle
18.the radius of a irraguler surface
19.the center of a regular surface
20.the length of a regular surface

You must login to add to the discussion.