

Name: _____

What is an Angle: Activities Packet

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Introduction

What is an ANGLE

What is an Angle?

Video of High School students giving their definitions of an angle.

It's a point where two lines come together and you get, I don't know... where two lines come together and you get a space.

A corner of a square or something...

It's a measurement in degrees or radians ... of a point... on a ... the radius of a circle ... where a line intersects it.

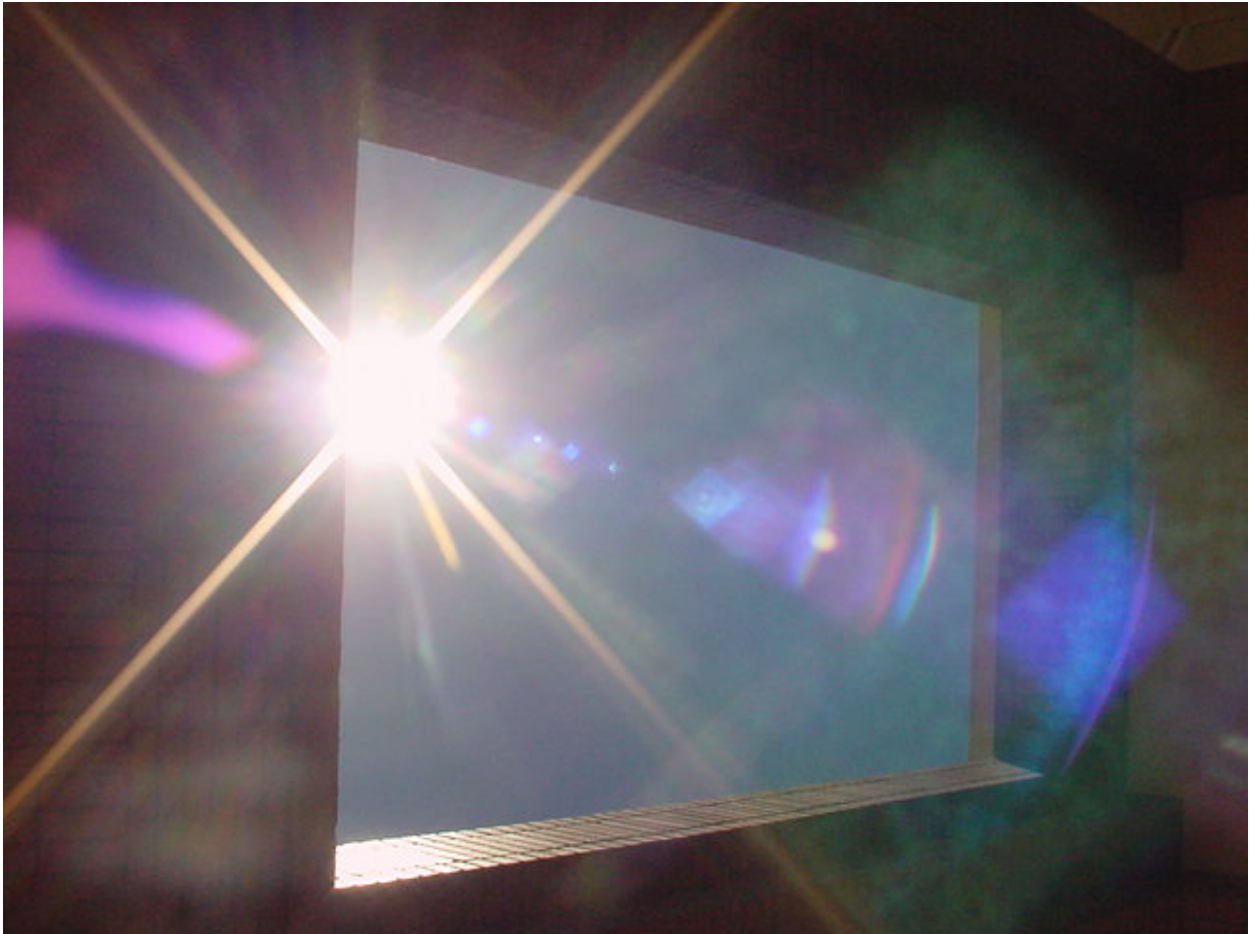
mmm ... An angle is where two lines come together at a point and ... it creates a corner or something like that ... and it depends on the number of degrees ... in there ... ahhh ... I don't know.



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Getting Ready

What is an ANGLE



Why Study Angles?

Satellites Orbit Earth to transmit information around the world and into outer space.

Geosynchronous satellites orbit Earth at a distance of 22,000 miles at a speed of 6,803 mph in the same direction Earth rotates.

From Earth, the satellite looks like it is at one location in the sky at all times.

Direct TV DBS1, the satellite that transmits MTV to your TV in your living room sits at a certain angle from Earth.

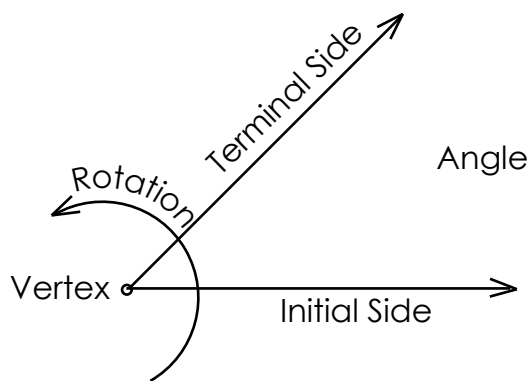
It's important to know what angles are!

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Components

What is an ANGLE

Each of the pictures have an angle.



An angle is made up of the following components:

1. Vertex
2. Initial Side
3. Terminal Side

The angle is the amount of rotation of the terminal ray from the initial ray.



What Is An Angle

Components Activity

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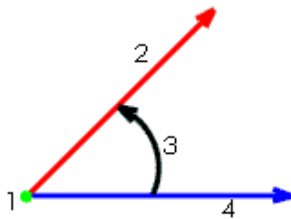
Label each angle from this word list:

terminal side

vertex

angle

initial side



1. _____
2. _____
3. _____
4. _____

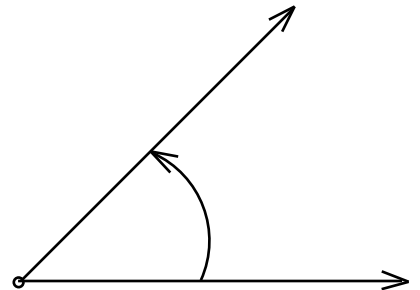
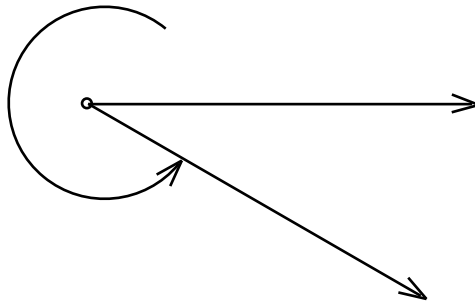
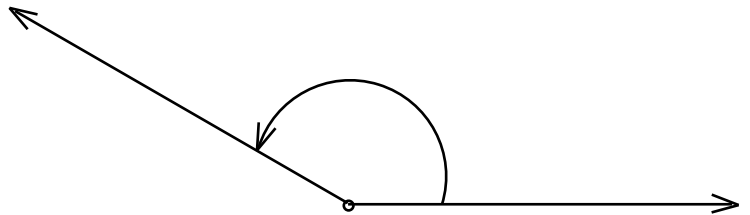
Print the Quiz and fill in the blanks.

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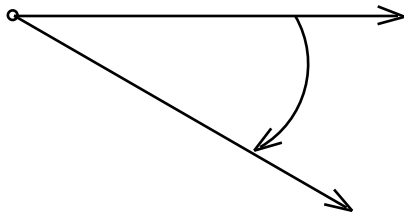
Positive vs. Negative Angles

What is an ANGLE

Angles can be positive
angles if the terminal ray
rotates
counterclockwise:

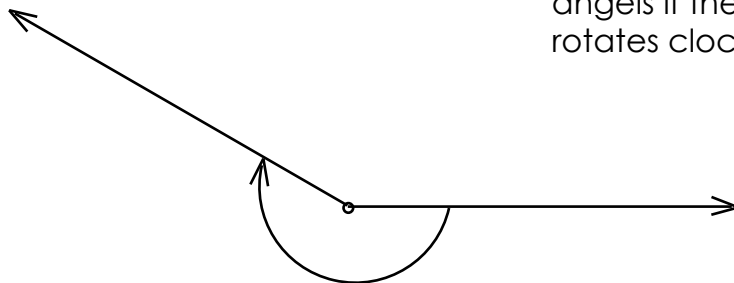
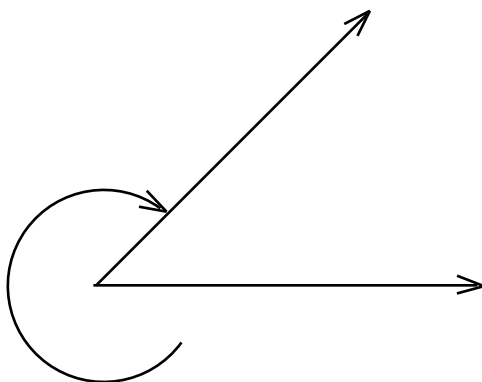


Positive = Counterclockwise



Negative = Clockwise

Angles can be negative
angles if the terminal ray
rotates clockwise

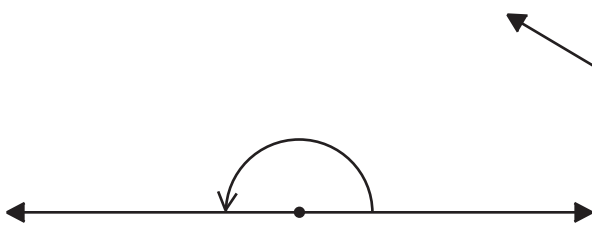


What Is An Angle ☐ ☐ Positive vs. Negative Angle Activity

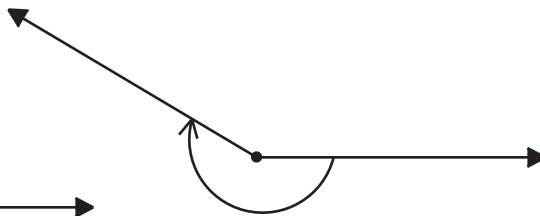
Name: _____ Date: _____

1. If the terminal side of an angle rotates counter clockwise from the initial side, the angle is _____.
2. If the terminal side of an angle rotates clockwise from the initial side, the angle is _____.
3. An angle is negative when the terminal side of an angle rotates _____.
4. An angle is positive when the terminal side of an angle rotates _____.

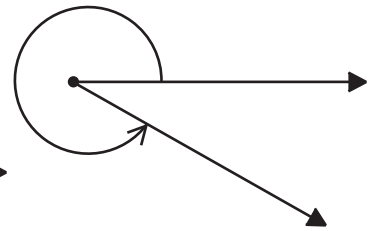
Label the following images as either positive or negative on the lines below:



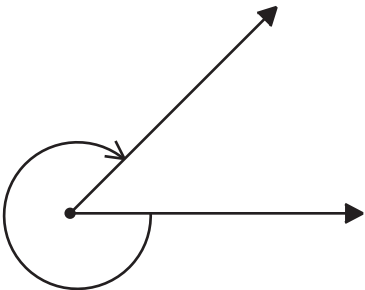
1. _____



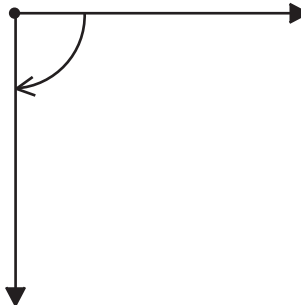
2. _____



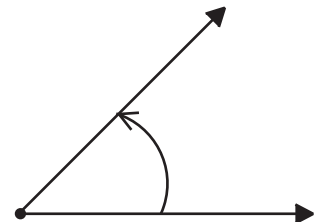
3. _____



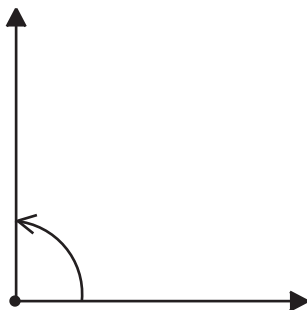
4. _____



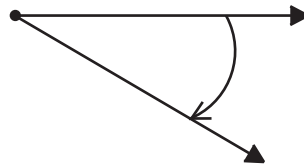
5. _____



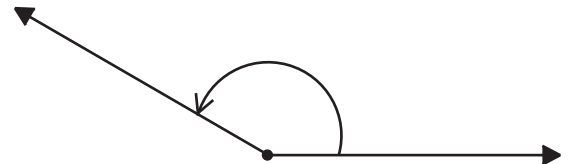
6. _____



7. _____



8. _____



9. _____



10. _____

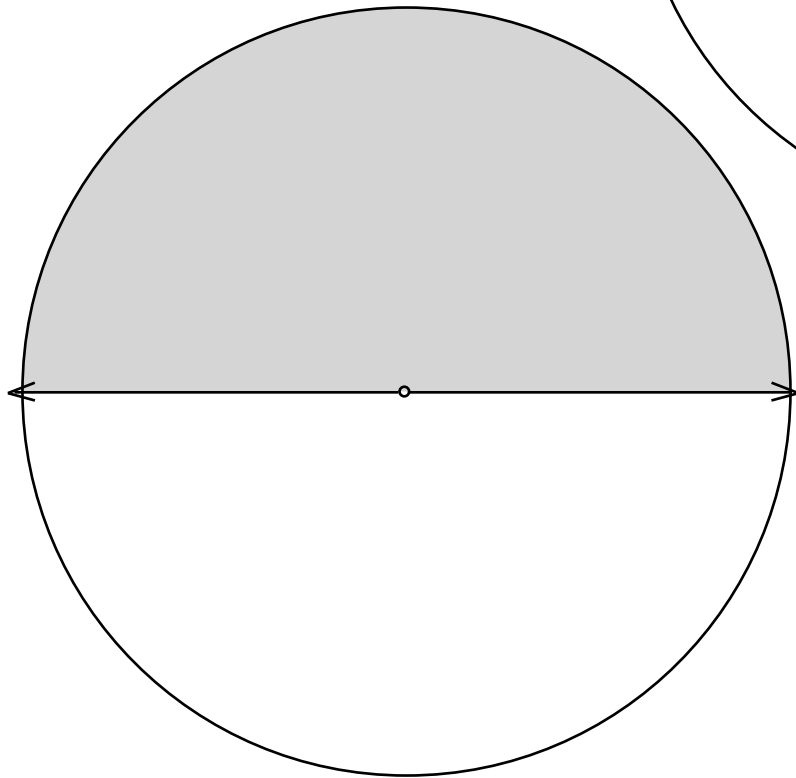
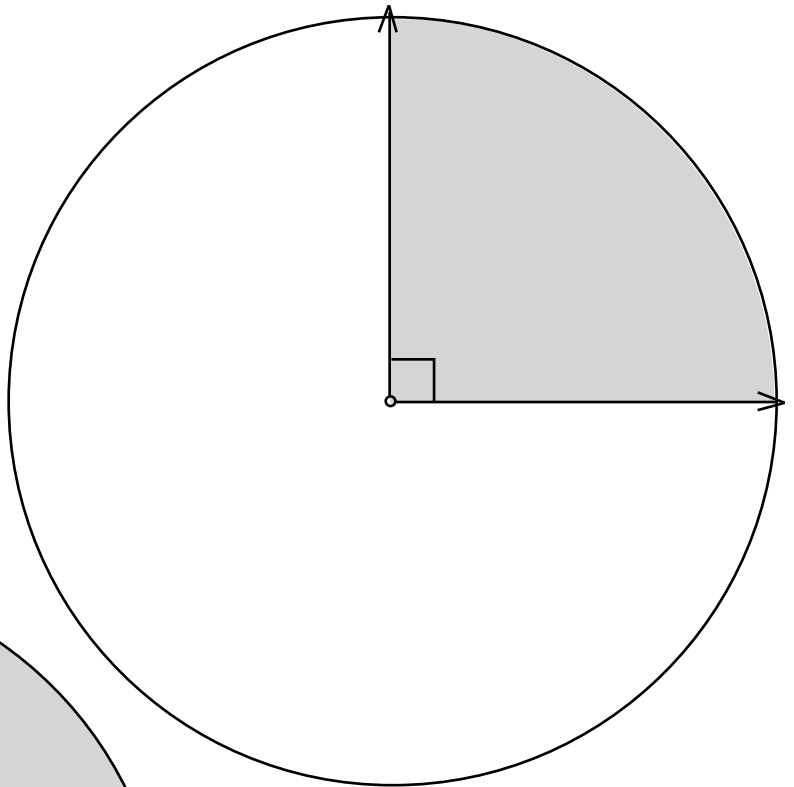
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Types of Angles

What is an ANGLE

Let's take the angle and put its vertex in the center of a circle.

A. If the angle cuts a $\frac{1}{4}$ section of a circle, the angle is called a right angle and is denoted with the square mark as indicated.



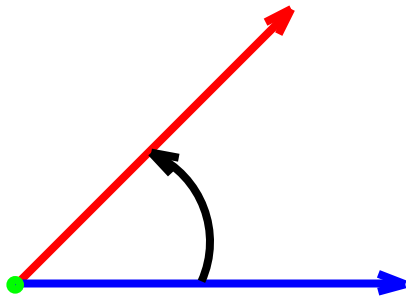
B. If the angle cuts a section so that the section is $\frac{1}{2}$ of the circle, the angle is called a straight angle.

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Angles are Everywhere

What is an ANGLE

Take a look around the room and write down the names of some items that have an angle.



Keep writing more things down if you see them!



1. _____
2. _____
3. _____
4. _____
5. _____
- _____
- _____
- _____

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Digging Deeper

What is an ANGLE

No angles, no MTV

Strong gusts of wind totally knocked your DSS satellite dish to the ground! The nuts and bolts have loosened. Your favorite band's video will debut this evening and you can't miss it.

You follow instructions , to mount the dish, carefully but you don't understand one part of the instructions.

5. Position the dish at an angle of 101° with the horizon.
You don't get your MTV if you don't know your angles.

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Angle Definition

What is an ANGLE

What is an Angle?

Here are more interviews of High School students giving their definitions of an angle after learning about them:

"An angle is when two lines meet. . . and make a vertex at the end of a point."

"An angle is the measurement of two rays. . . the vertex of two rays. . . umm. . . either in degrees. . . degrees, minutes or degrees seconds. . . and it's found by rotating the terminal side of the initial ray counter clockwise and measuring the inside of the . . . hmmph. . ."

"An angle is where two rays come together at a common point called a vertex and it's measured in degrees, minutes and seconds."

"An angle is the vertex of two rays that can be measured in degrees, radians or minutes and seconds. . . Psych!"