Learning Center

Schoolcraft College

Jump Start

Session 3

The Beginning: Vocabulary

- A denotes a _____ which occupies space but has no dimension.

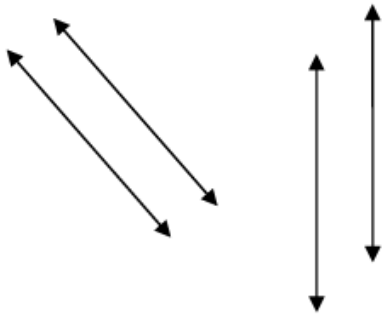
$\overleftrightarrow{AB}$ denotes a _____ which extends infinitely in both directions.

$\overrightarrow{AB}$ denotes a _____ which extends infinitely in one direction.

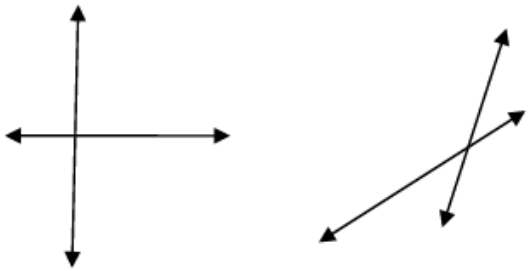
$\overline{AB}$ denotes a _____ which has a fixed length.

If you have more than one line, ray, or line segment, two things can happen:

The lines are _____ meaning, they *never* meet/intersect.

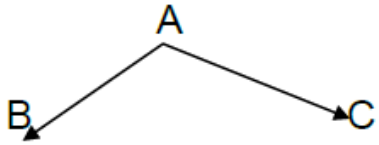


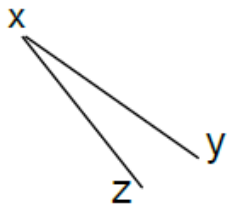
The lines are _____, meaning they *do* meet/intersect.



Angles

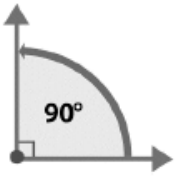
When two lines or rays intersect, they form angles that can be named and classified.
Naming Angles:



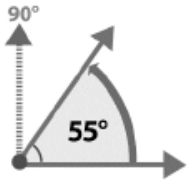


Draw angle EFG:

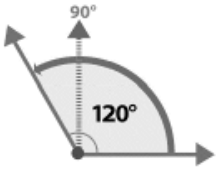
Naming Angles cont.



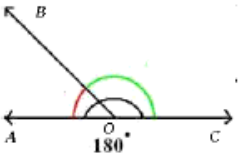
When two lines meet and form a 90° angle, the lines are _____ and form a _____.



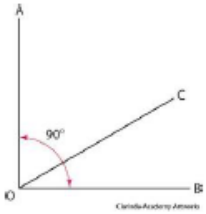
When an angle's measure is greater than 0° but less than 90° the angle is called an _____.



When an angle's measure is greater than 90° but less than 180° the angle is called an _____.



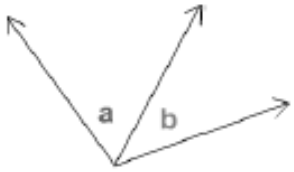
Two angles, whose sum is 180°, are called: _____ _____

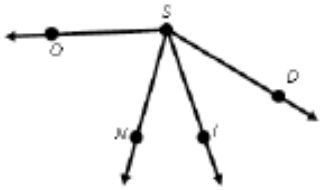


Two angles, whose sum is 90°, are called:_____

Classifying Angles

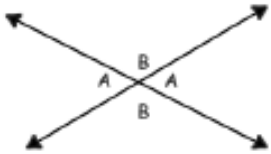
Angles located next to each other and sharing a common side are called _____

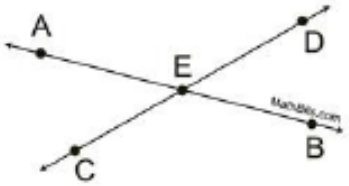




Angles located directly across from each other are called_____.

Vertical angles are _____, meaning _____.

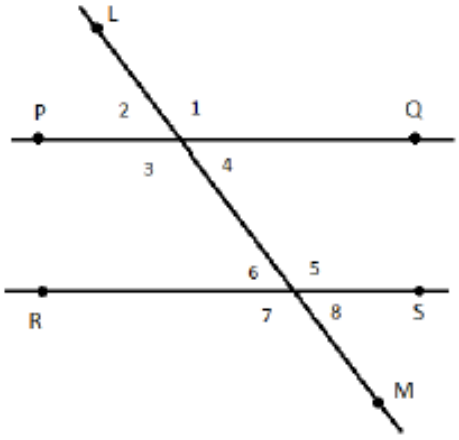


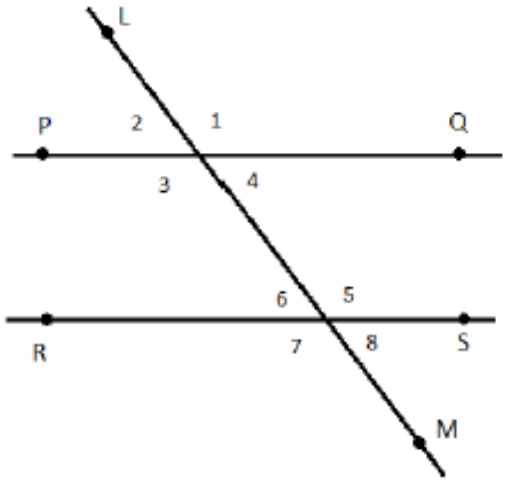


More Special Angles

A line that intersects two parallel lines is called a _____

These lines form special angle relationships. PQ is parallel to RS





Corresponding angles are located in the *same position* compared to the transversal.

Corresponding angles:_____

Opposite exterior angles are located outside the parallel lines on opposite sides of the transversal.

Opposite exterior angles:_____and are _____

Opposite interior angles are located inside the parallel lines on opposite sides of the transversal.

Opposite interior angles:_____and are _____

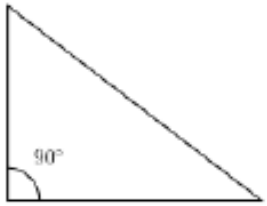
Name 2 pairs of vertical angles:

Name 2 pairs of adjacent angles:

Name two pairs of supplementary angles:

Polygons - Classifying Triangles

By Angle Measure

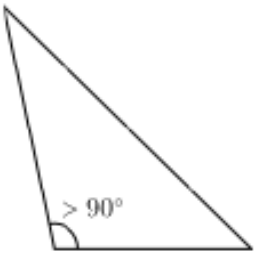


Right Triangle_____

_____

Acute Triangle_____

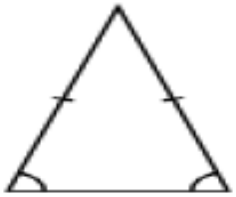
_____



Obtuse Triangle_____

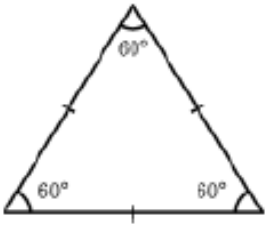
_____

By Side Measure



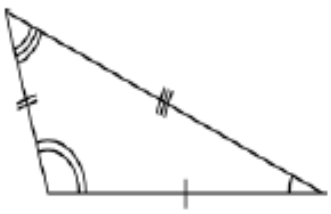
Isosceles Triangle_____

_____



Equilateral Triangle_____

_____



Scalene Triangle_____

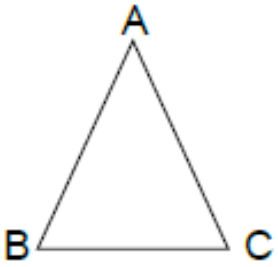
_____

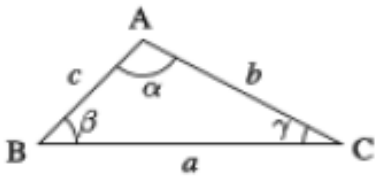
Properties of Triangles

A triangle has _____sides, which form _____

The sum of these angles must always add up to _____

‹ A + ‹ B+ ‹C = _____ ‹α+‹β+‹γ=_____

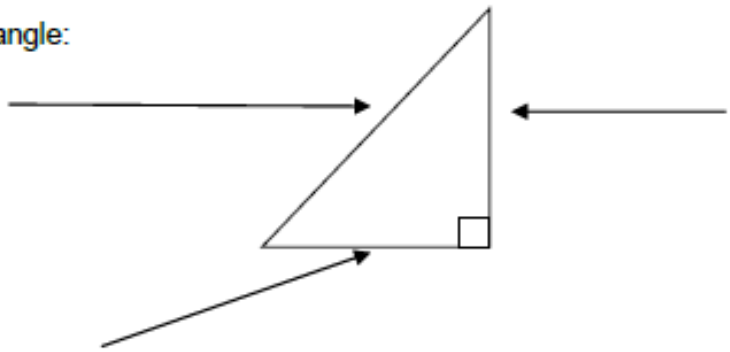




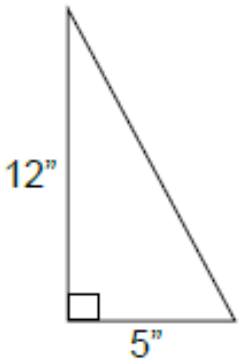
The Pythagorean Theorem $a^2+b^2=c^2$

The Pythagorean Theorem is used to find the length of a side of _____
Warning: This can only be used with right triangles.

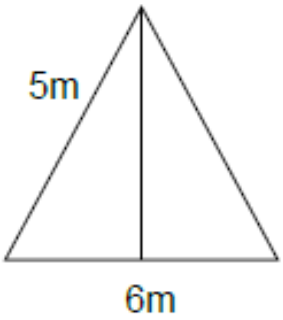
Parts of a right triangle:



Find the length of the hypotenuse



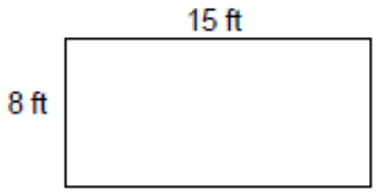
Find the height of the triangle



Perimeter

Perimeter refers to the _____

Think:_____Perimeter of a polygon=_____

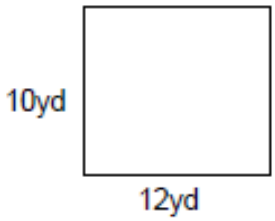


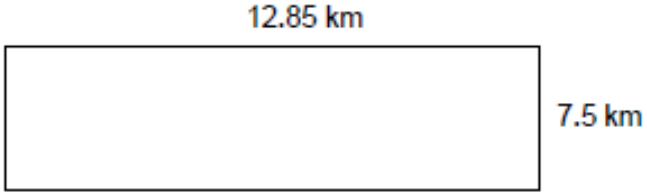
AREA

Area measures the _____of a geometric figure. Think:_____

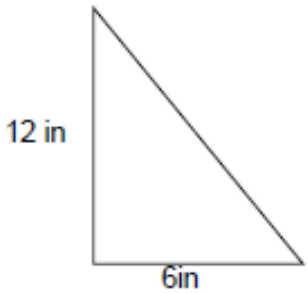
Area is ALWAYS expressed in _____

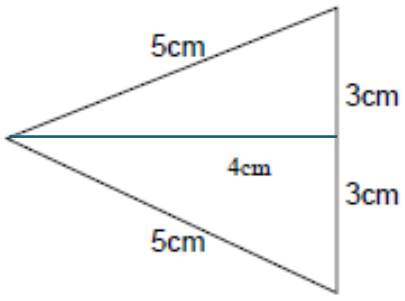
Area of a square or rectangle =_____



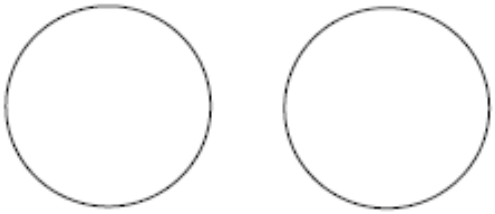


Area of a triangle= _____





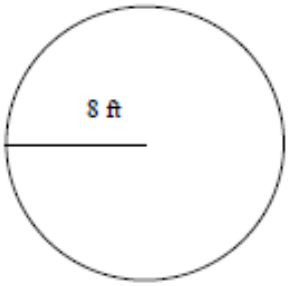
Circumference, Area, Circles & *that thing they call pi*



π is the ratio of a circle's _____

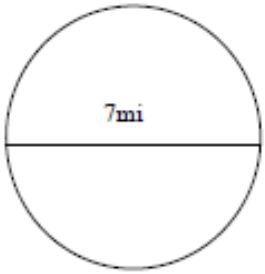
$\pi \approx$

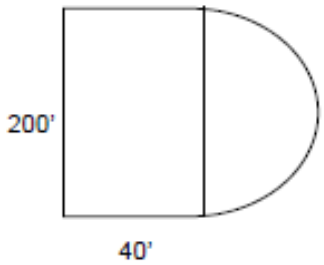
Circumference (perimeter) of a circle=_____



Find the circumference of a circle with diameter $\frac{1}{4}$ mm.

Area of a circle=_____





Converting Units (Dimensional Analysis)

One way of converting units relies on the rules for equivalent fractions. We can _____ by _____ to change the appearance of a fraction without changing the value.

Ex: Convert $\frac{5}{8}$ to 24ths

We can use this to change the units of a measurement, if we know the relationship between the units.

Ex: Convert 12 ft to yards

Ex: Convert 180 pounds to kg (Note: 1 kg = 2.2 pounds)

Ex: Convert 5 ft^2 to in^2

Ex: Convert 50 mph to m/s (Note: 1 mile = 1.609 km)