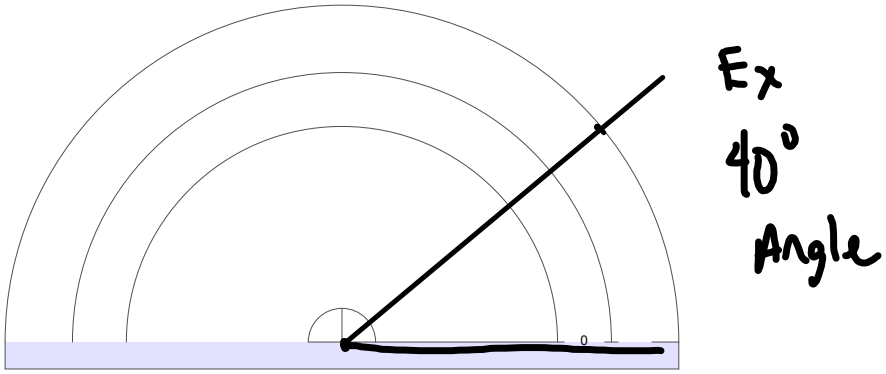
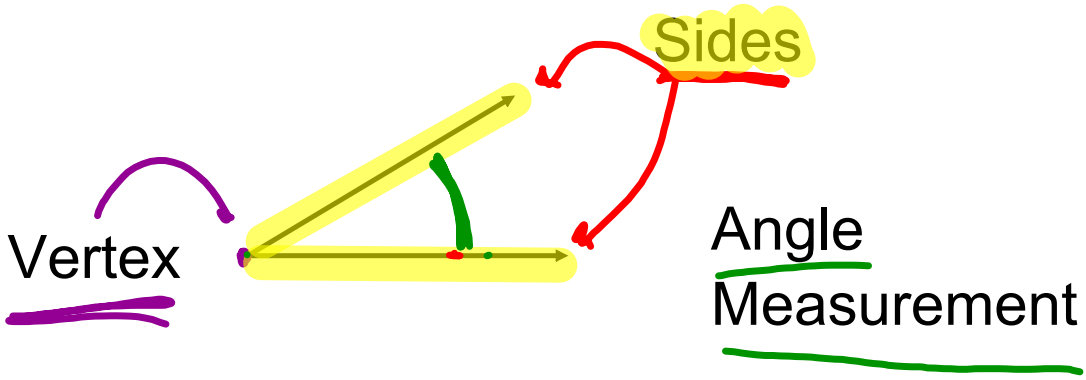
Geometry: 1.5 Measuring and Constructing Angles

Degrees: A unit (like inches or feet) that is used to measure an angle.



Constructing Angles:

Angles have 1 Vertex and 2 Sides:



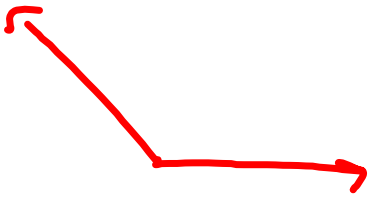
Angles measuring Less than 90 degrees:

Acute 

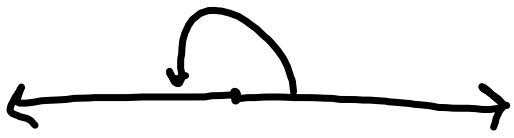
Angles measuring 90 degrees:

Right 

Angles measuring greater than 90 but less than 180 degrees:

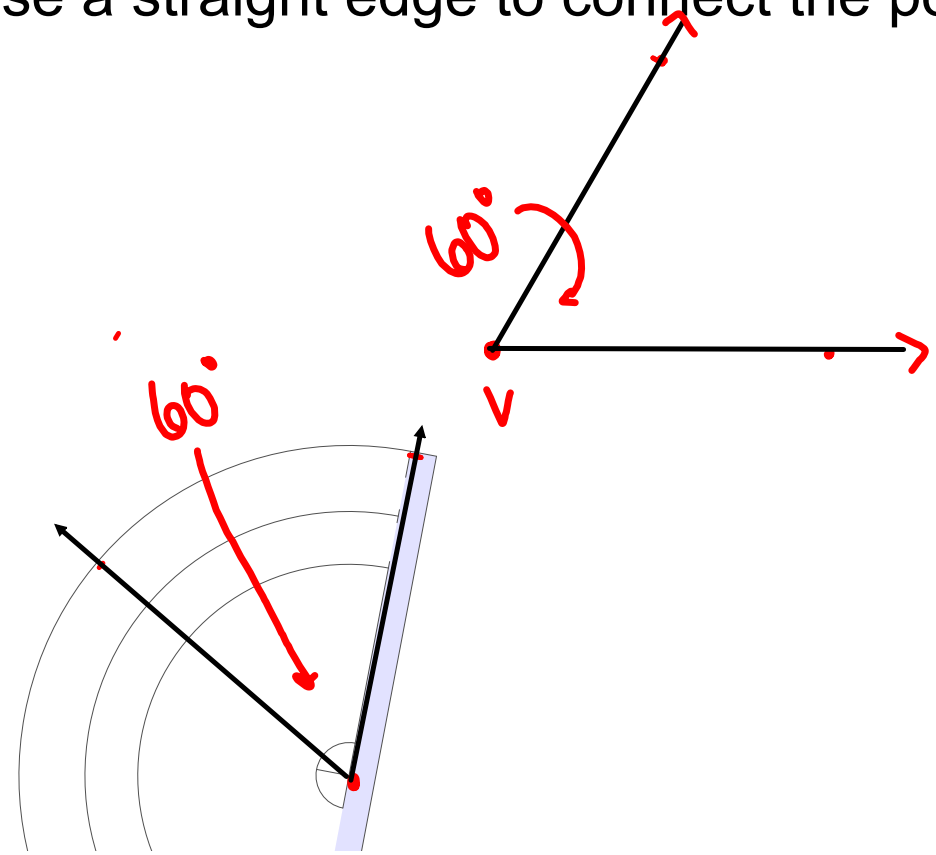

Obtuse


Angles measuring 180 degrees:

Straight 

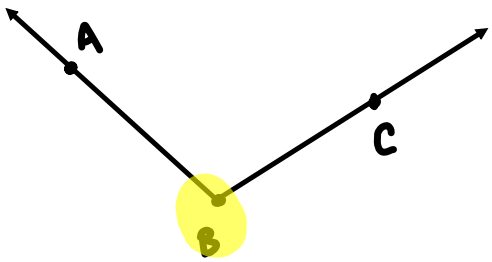
Draw a 60 degree angle using a protractor.

1. Put a point on your paper. That will be the vertex of your angle.
2. Put your protractor's center on the dot.
3. Along the gap near the edge of the protractor, make a mark at the 0 degrees and 60 degrees.
4. Use a straight edge to connect the points.



Naming angles:

Angles are labeled by three letters, where the letters are points and the middle letter is the vertex of the angle.



Angle Symbol: ∠

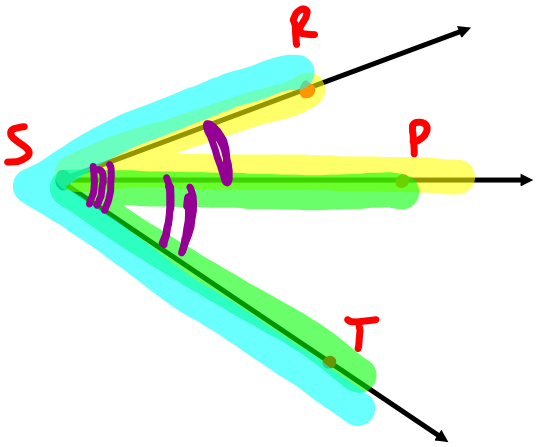
Angle Names (3 of them for every angle):

∠ABC or ∠CBA

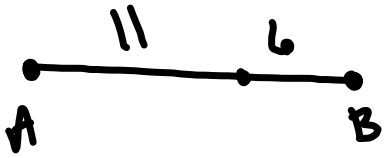
∠B

Angles forming angles:

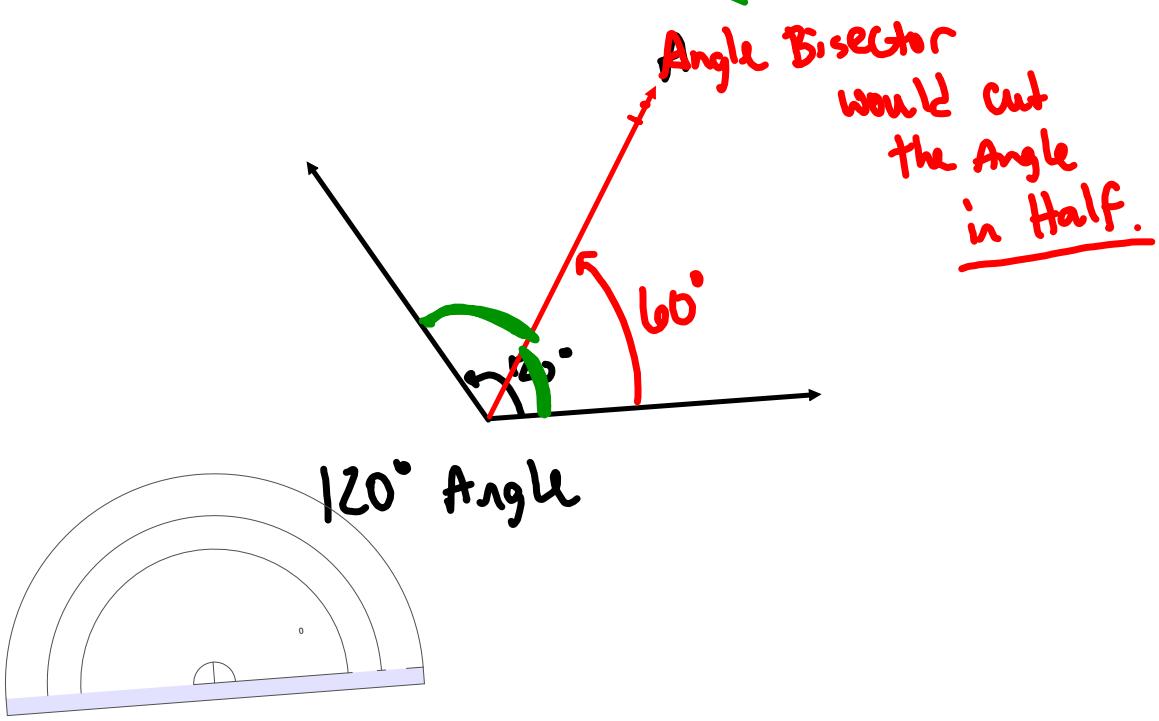
What is the relationship between these three angles? $\angle RSP + \angle PST = \angle RST$



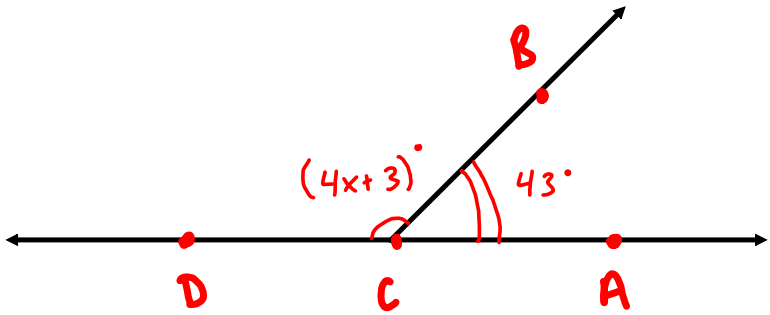
Ex



Bisectors and Angle markings.



Ex: $\angle ACD$ is a straight angle. Solve for x.



$4x+3+43=180°$

$4x+46=180°$

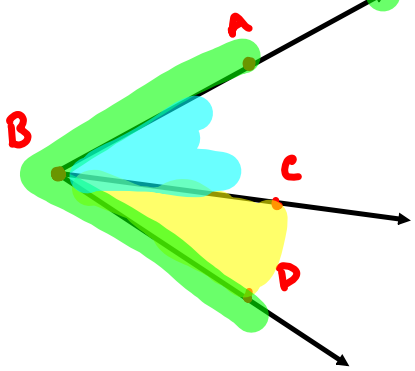
$-46 \quad -46$

$\frac{4x}{4} = \frac{134°}{4}$

$x = 33.5$

Problem Solving: Solve for x.

$\angle CBD = (x+3)^\circ$ $\angle ABD = 48^\circ$ $\angle ABC = (2x+5)^\circ$



$x+3 + 2x+5 = 48$

$3x+8 = 48$

$-8 \quad -8$

$\frac{3x}{3} = \frac{40}{3}$

$x = 13.\overline{3}$

Homework:

Pages 41-43

Numbers: 7-12, 15, 16, 22-27, 43