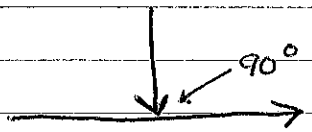
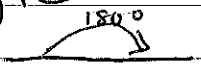
Chapter 7 - Math 10AW - notes

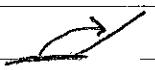
parallel lines ⇒  { always the same distance apart.

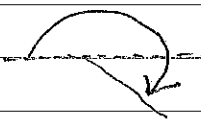
perpendicular lines ⇒ 

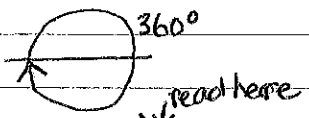
right angle - a 90° angle 

straight angle - 180° 

acute angle - less than 90°

obtuse angle - greater than 90° less than 180° 

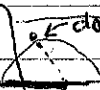
reflex angle - greater than 180° but less than 360° 

* 360° = a circle 

To use a protractor

Find measure

1. line up the bottom line with the straight side of the angle
2. put the dot in the middle of the protractor at the point at the end on the line
3. follow the line (angle) to read the protractor

TO draw an angle 

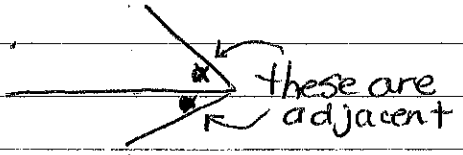
1. make a line with the bottom of the protractor
2. go from the end of the line up to the angle & place a dot there
3. connect the dot to the end of the line.

7.2 Math 10 Aw - notes

angles - describing

adjacent angles - share common vertex and common arm.

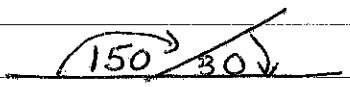
adjacent = beside.



Vertex - where line changes direction

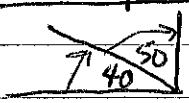
Supplementary angles - 2 angles with sum of 180°

Sum = add



$150° + 30° = 180°$

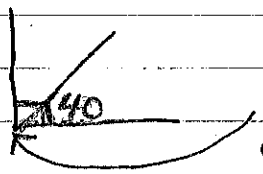
Complementary angles - 2 angles with sum of 90°



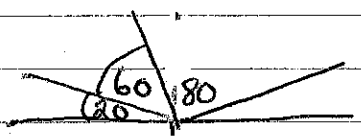
$40° + 50° = 90°$

To find missing angles:

Subtract from what you know



you know this is 90°
so $90 - 40 = 50°$



$= 180°$

so → $\boxed{180} - 60 - 20 - 80 = 20°$

7.3 Math10Aw - notes

Bisecting Angles (to cut in half)

Use a compass

see pg 190

1. place pointed end on vertex of the angle. Draw an arc from one side to the other
2. place pointed end where arc crosses 1st line of angle, Draw an arc above angle
3. place pointed end on 2nd line of angle, Draw an arc that meets other arc.
4. Draw a line from intersection of 2 arcs to vertex of the angle.

7.4 Replicating Angles

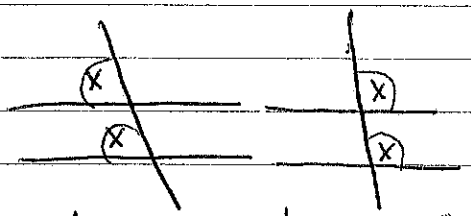
see pg. 192

1. place comp on vertex. Draw a large arc.
2. place again on line where arc crosses. Draw a line that crosses original arc
3. using a ruler, connect intersection of 2 arcs to vertex.

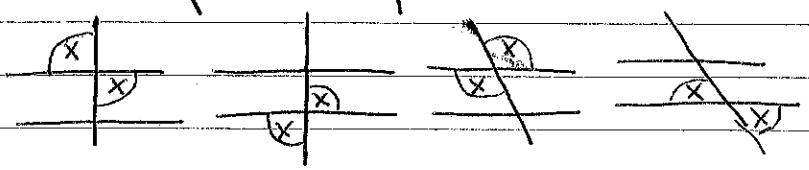
7.5 Math 10 AW - notes

Classifying Lines & Angles

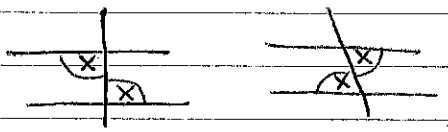
corresponding angles



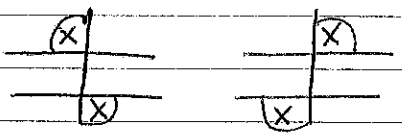
opposite angles



alternate interior angles



alternate exterior angles

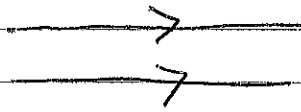


horizontal = ←→

vertical = ↕

7.6 Parallel lines and Transversals

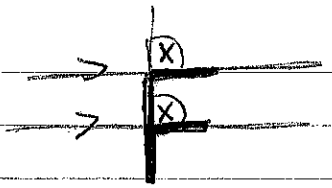
Parallel lines are indicated with arrows



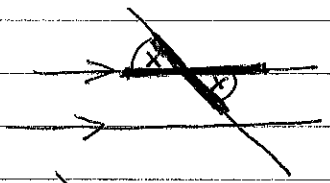
with Parallel lines:

corresponding angles are equal
opposite angles are equal
alternate interior angles are equal.
interior angles equal 180°

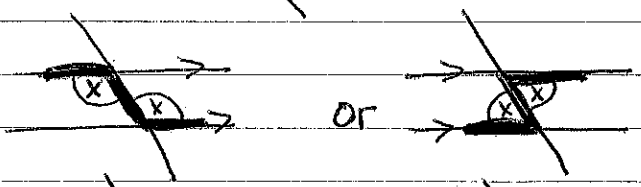
Corresponding angles (F)



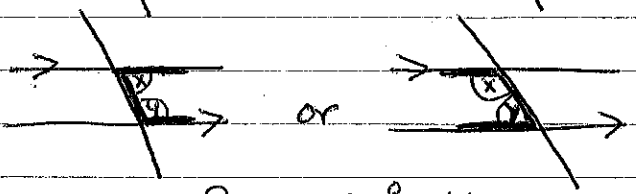
opposite angles (X)



alternate interior angles (Z)

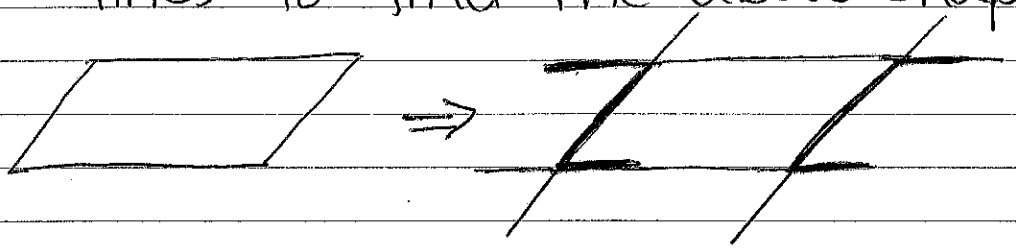


interior angles (C)

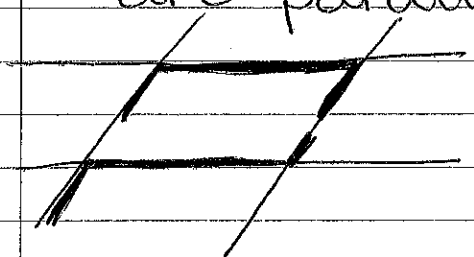


$x + y = 180^\circ$ so if $x = 80^\circ$ then $y = 180^\circ - 80^\circ = 100^\circ$

Sometimes you will have to extend the lines to find the above shapes.



in a parallelogram both opposite sides are parallel so you can also do



* remember all angles in a triange $= 180^\circ$