

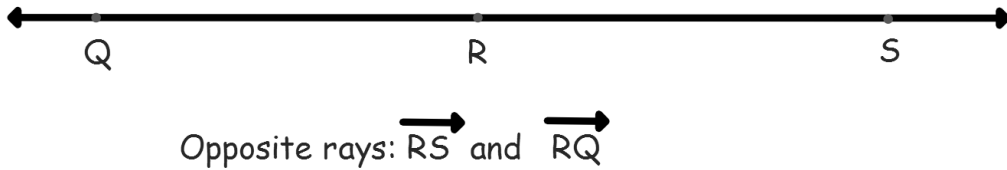
Lesson 3: Angle Measure

Pre-Vocab:

Ray : part of a line with one endpoint and extends indefinitely in one direction



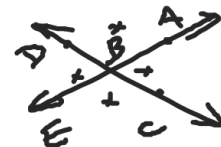
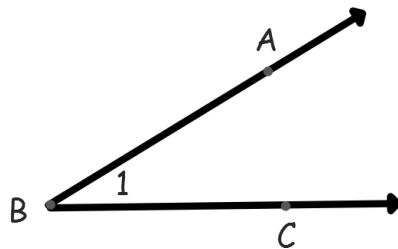
Opposite Rays : If a point is chosen on a line, it determines exactly 2 rays.



Angle : formed by two noncollinear rays that have a common endpoint

* Rays are called SIDES (\overrightarrow{BA} , \overrightarrow{BC})

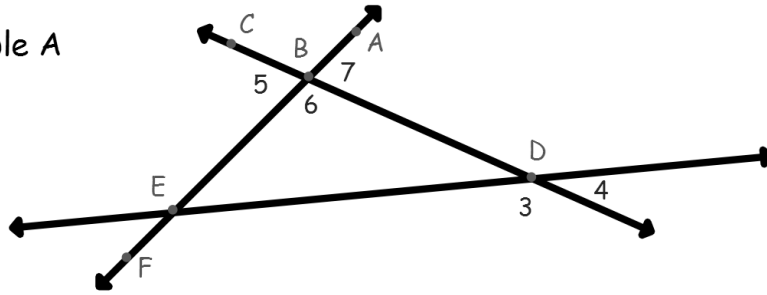
* Common endpoint is the VERTEX (point B)



An angle can be named three different ways:

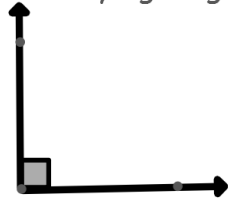
- * By starting at point on side of angle and following it around to vertex and then to other point on other side..... $\angle ABC$ or $\angle CBA$
- * By vertex.... $\angle B$ (only if it is a single angle)
- * By number.... $\angle 1$ (only if it is numbered)

Example A

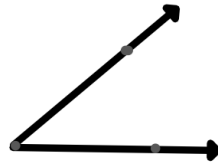


- a. Name all angles that have B as a vertex. $\angle 7$ ($\angle ABD$), $\angle 6$ ($\angle EBD$), $\angle 5$ ($\angle CBE$)
- b. Name the sides of $\angle 5$. \overrightarrow{BC} , \overrightarrow{BE}
- c. Write another name for $\angle 6$. $\angle EBD$, or $\angle FBD$

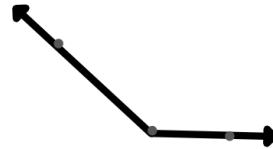
Classifying Angles



Right Angle: = 90



Acute Angle: < 90

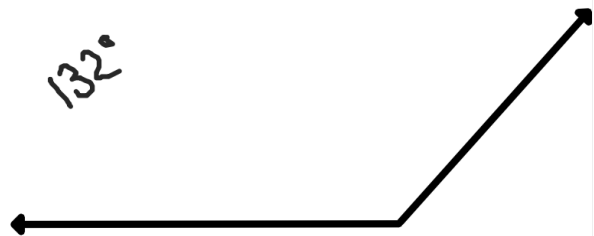
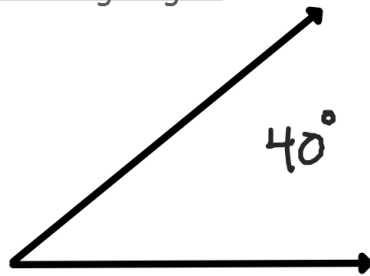


Obtuse Angle: > 90

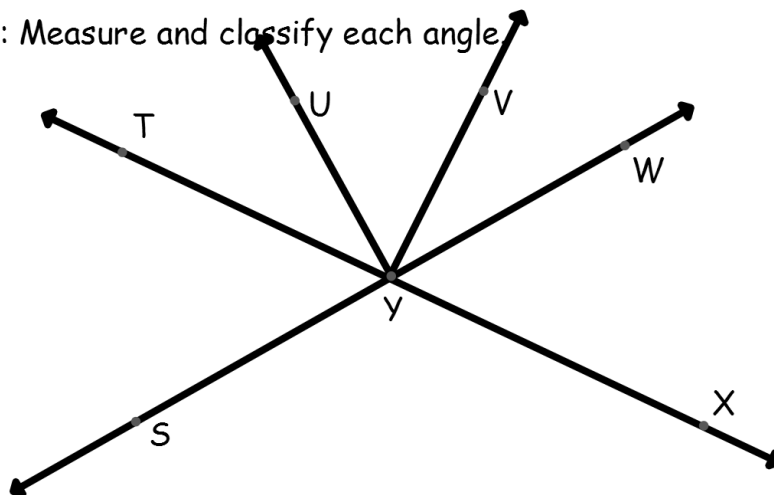


Straight Angle: = 180

Measuring Angles: tool used to measure an angle is the PROTRACTOR.

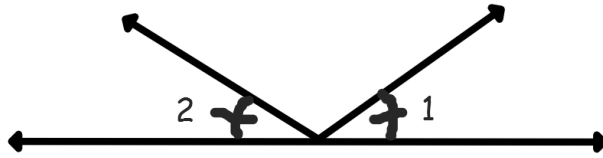


Example B: Measure and classify each angle



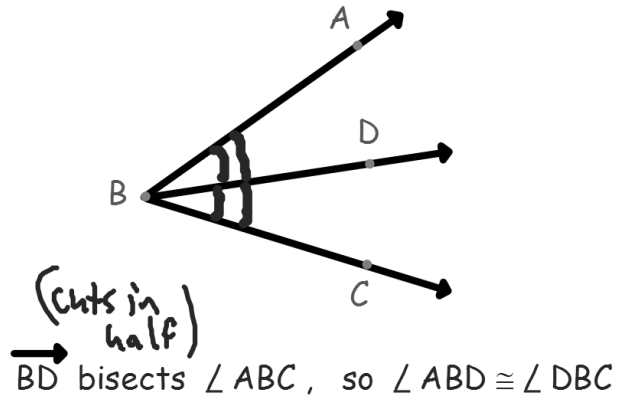
- a. $\angle TVV = 90^\circ$
Right
- b. $\angle WYT = 125^\circ$
Obtuse
- c. $\angle TYU = 35^\circ$
acute

Congruent Angles : angles with the same measure

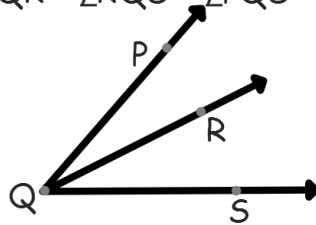


$$\angle 1 \cong \angle 2$$

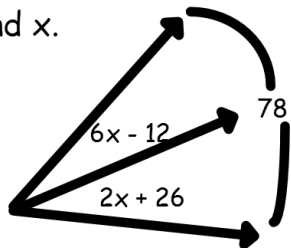
Angle Bisector : a ray that divides an angle into two congruent angles



Angle Addition Postulate : If R is in the interior of $\angle PQS$, then
 $\angle PQR + \angle RQS = \angle PQS$



Ex A: Find x.



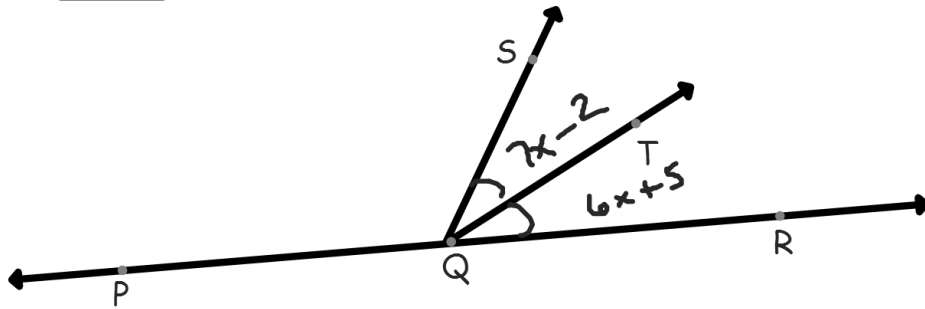
$$6x - 12 + 2x + 26 = 78$$

$$8x + 14 = 78$$

$$8x = 64$$

$$x = 8$$

Ex C: QT bisects $\angle RQS$. If $\angle RQT = 6x + 5$ and $\angle SQT = 7x - 2$, find $\angle RQT$.



* LP b9 n leave

* L3

$$7x - 2 = 6x + 5$$

$$x = 7$$

$$6(7) + 5 = \textcircled{47^\circ}$$