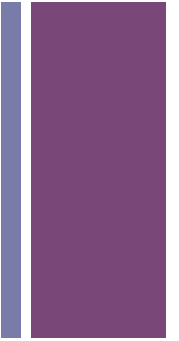


Boolean Logic

+ Inventor

- George Boole
 - 1815 – 1864
 - Look him up on Wikipedia



+ Basic Operations

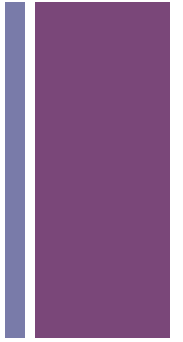
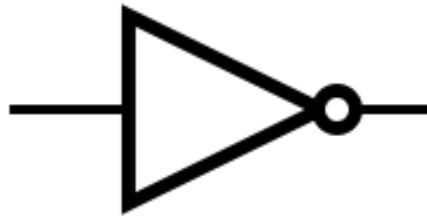
- AND



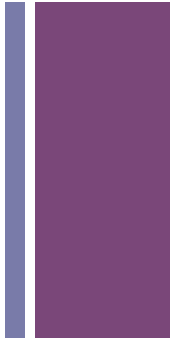
- OR



- NOT



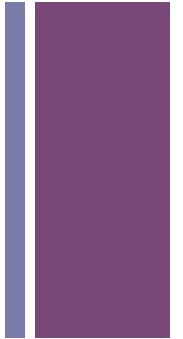
+ Truth Tables



- And

x	y	$x \text{ AND } y$
T	T	T
T	F	F
F	T	F
F	F	F

+ Truth Tables



- Or

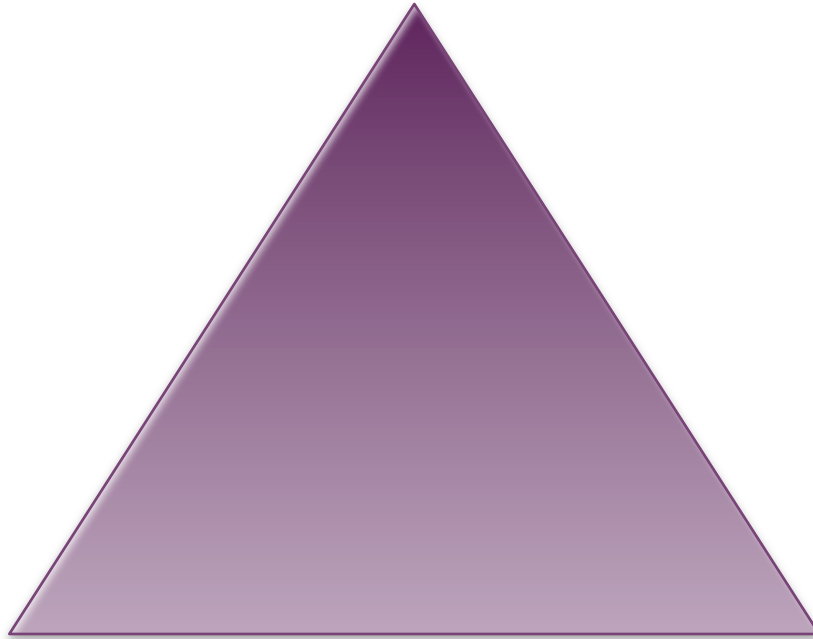
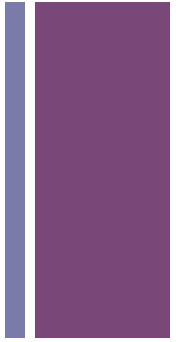
x	y	$x \text{ AND } y$
T	T	T
T	F	T
F	T	T
F	F	F

+ Truth Tables

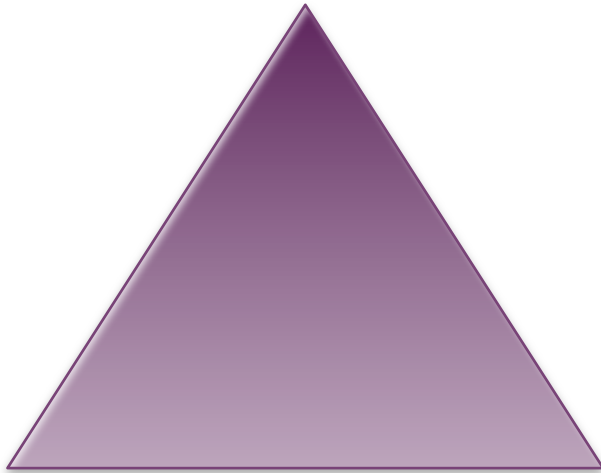
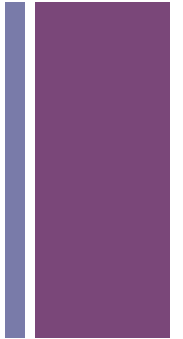
- Not

x	$NOT\ x$
T	F
F	T

+ Is it purple AND a triangle?

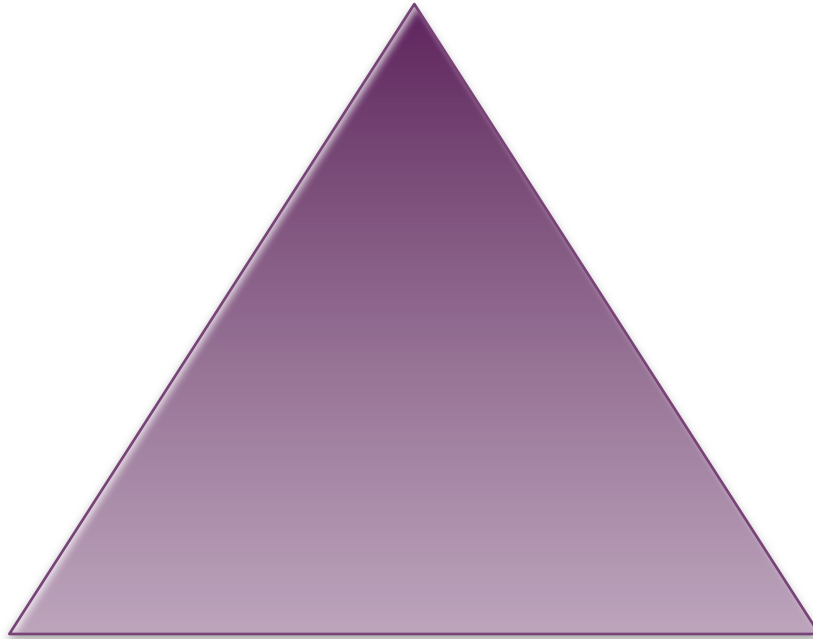
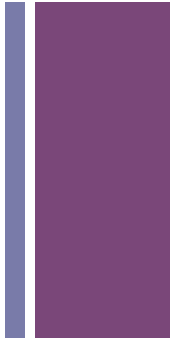


+ Is it purple AND a triangle?

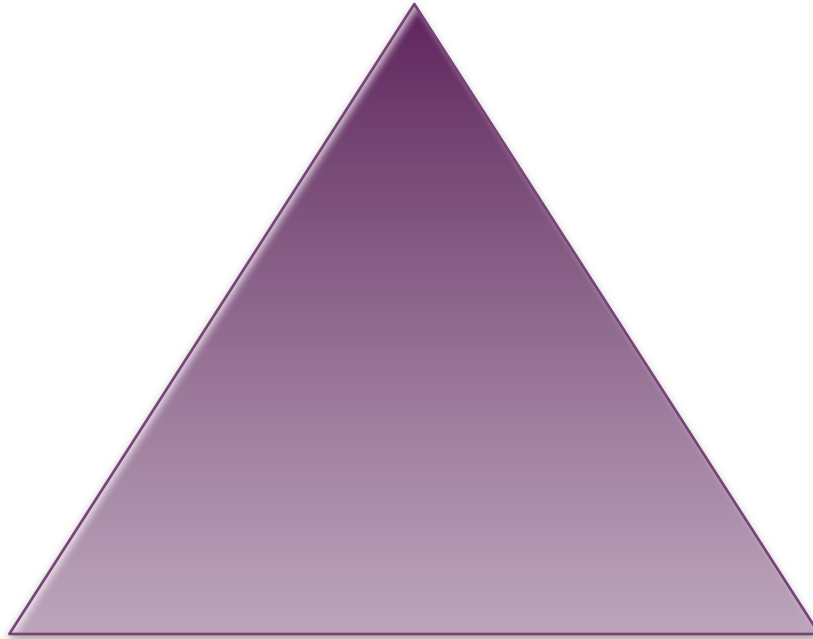
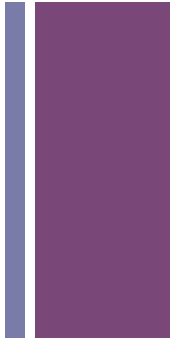


<i>Purple</i>	<i>Triangle</i>	<i>purple AND triangle</i>
T	T	T
T	F	F
F	T	F
F	F	F

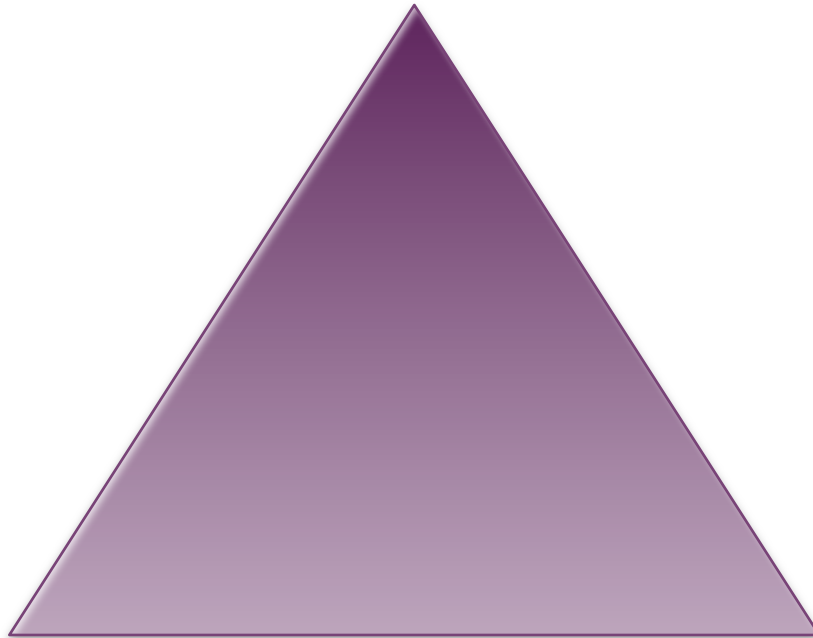
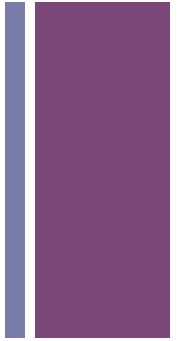
+ Is it purple OR a triangle?



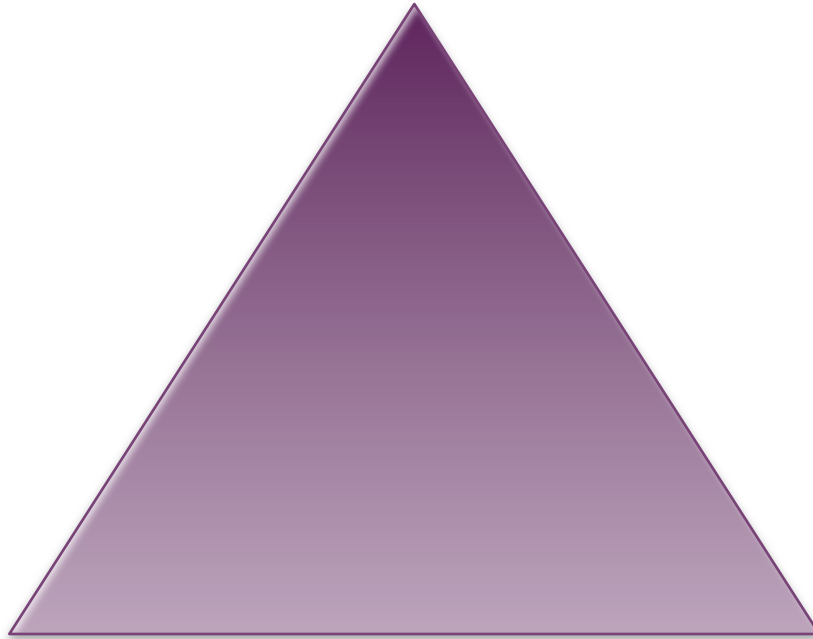
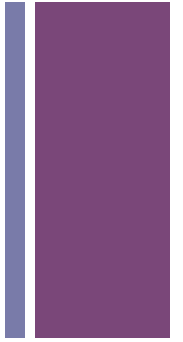
+ Is it purple AND a circle?



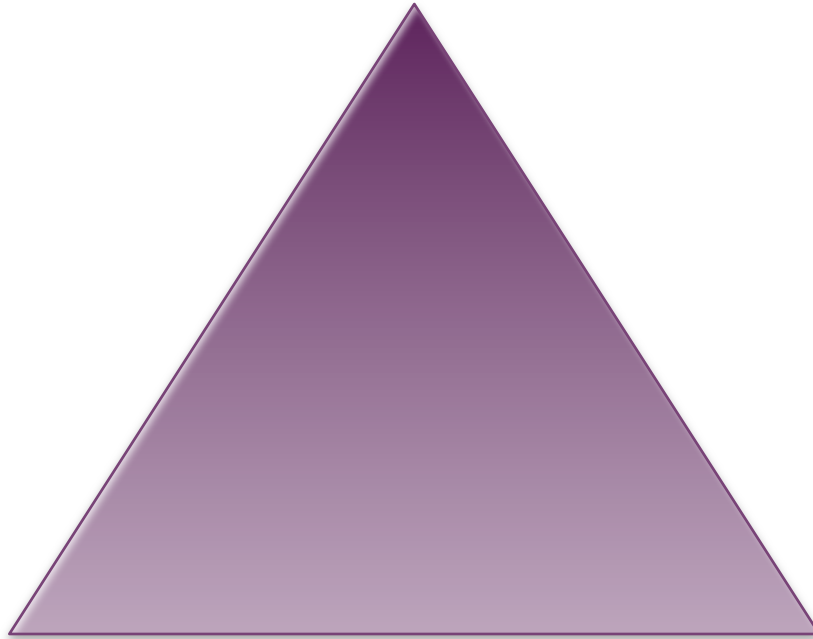
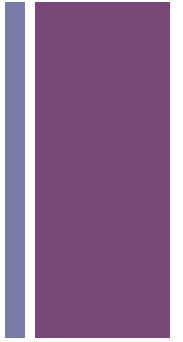
+ Is it purple OR a circle?



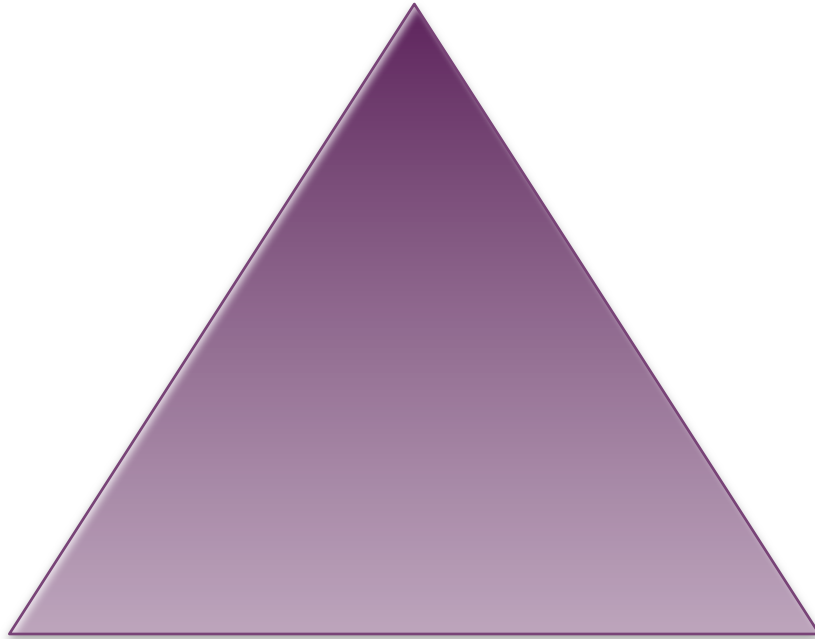
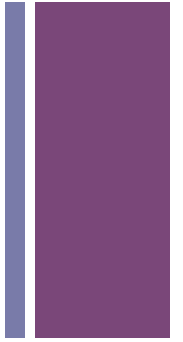
+ Is it yellow OR a circle?



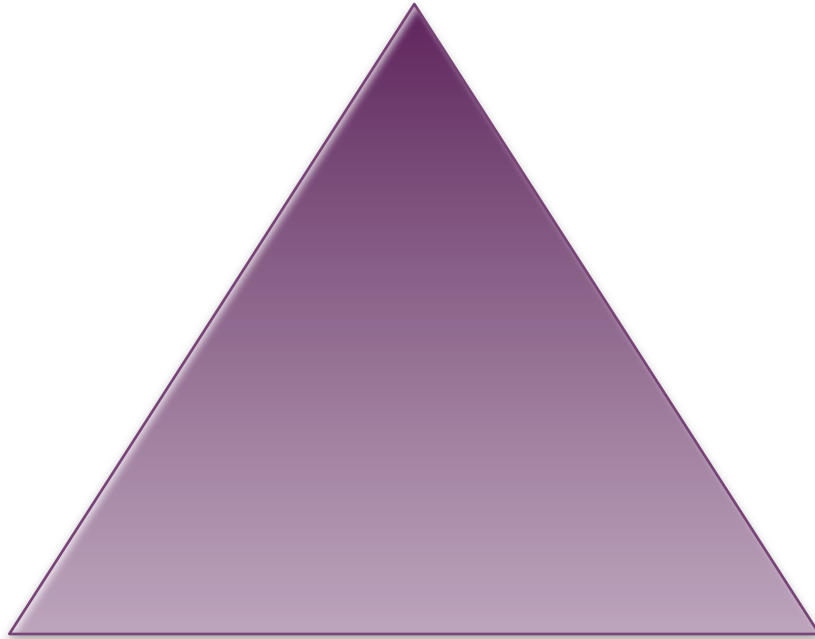
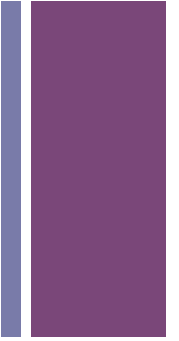
+ Is it yellow **AND** a circle?



+ Is it NOT yellow?



+ Is it NOT purple?





Follow Up Topics

Where would you look these up?

- Logic Gates
- NOR Gate
- Flip Flop
- Dynamic RAM = Random-Access Memory
- Static RAM
- ROM = Read-Only Memory
- EPROM = Erasable Programmable ROM

