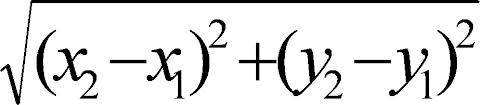
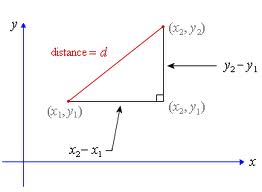
**The Distance Formula  
  
The distance formula can be obtained by creating a triangle and using the Pythagorean Theorem to find the length of the hypotenuse. The hypotenuse of the triangle will be the distance between the two points.**

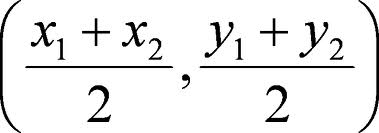
The subscripts refer to the first and second points; it doesn't matter which points you call first or second.  
  
x2 and y2 are the x and y coordinates for one point  
x1and y1 are the x and y coordinates for the second point  
d is the distance between the two points

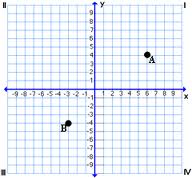
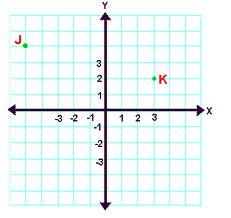
The Distance Formula

[](http://www.google.com/imgres?q=distance+formula&hl=en&sa=X&tbo=d&biw=1195&bih=803&tbm=isch&tbnid=egwJwmIB4xPz3M:&imgrefurl=http://geometry.jdeer.com/L1_8.htm&docid=4zBAEbfaLEw5tM&imgurl=http://geometry.jdeer.com/Images/c1/distance%252520formula.gif&w=923&h=202&ei=ILSbUJXHMpHe8AT0toHQAg&zoom=1&iact=hc&vpx=300&vpy=225&dur=1092&hovh=105&hovw=480&tx=287&ty=63&sig=107197431914939767308&page=1&tbnh=39&tbnw=176&start=0&ndsp=26&ved=1t:429,r:2,s:0,i:96)

[](http://www.google.com/imgres?q=distance+formula&start=119&hl=en&sa=X&tbo=d&biw=1195&bih=803&addh=36&tbm=isch&tbnid=epB0jX2TL0NdzM:&imgrefurl=http://www.intmath.com/plane-analytic-geometry/1-distance-formula.php&docid=Sx5quWnHAChJSM&imgurl=http://intmstat.com/plane-analytic-geometry/Image1401.gif&w=352&h=258&ei=KrSbUITqKIzW8gSq6IDwBw&zoom=1&iact=hc&vpx=169&vpy=168&dur=2964&hovh=192&hovw=262&tx=136&ty=96&sig=107197431914939767308&page=5&tbnh=138&tbnw=188&ndsp=30&ved=1t:429,r:1,s:119,i:105)

The Midpoint Formula

[](http://www.google.com/imgres?q=distance+formula&um=1&hl=en&sa=N&tbo=d&biw=977&bih=750&tbm=isch&tbnid=YZaNBnKNvjEhLM:&imgrefurl=http://geometry.jdeer.com/L1_8.htm&docid=4zBAEbfaLEw5tM&imgurl=http://geometry.jdeer.com/Images/c1/midpoint%2520formula.gif&w=724&h=254&ei=wWmaUO_LKpLc8ATfsYDQAw&zoom=1&iact=hc&vpx=206&vpy=300&dur=1760&hovh=133&hovw=379&tx=212&ty=85&sig=107197431914939767308&page=3&tbnh=65&tbnw=185&start=40&ndsp=27&ved=1t:429,r:8,s:40,i:249)

[](http://www.google.com/imgres?q=distance+formula&hl=en&sa=X&tbo=d&biw=1195&bih=803&tbm=isch&tbnid=HQboCsDhH1QruM:&imgrefurl=http://mdk12.org/instruction/clg/lesson_plans/geometry/Pythagorean_212.html&docid=cJQt22vt2J_vPM&imgurl=http://mdk12.org/share/clgtoolkit/lessonplans/images/overheadsm1.gif&w=240&h=223&ei=ILSbUJXHMpHe8AT0toHQAg&zoom=1&iact=hc&vpx=310&vpy=124&dur=1810&hovh=178&hovw=192&tx=121&ty=91&sig=107197431914939767308&page=2&tbnh=145&tbnw=155&start=26&ndsp=32&ved=1t:429,r:8,s:26,i:202)[](http://www.google.com/imgres?q=distance+formula&um=1&hl=en&sa=N&tbo=d&biw=977&bih=750&tbm=isch&tbnid=ecB8RQw6P_o3RM:&imgrefurl=http://www.regentsprep.org/Regents/math/geometry/GCG3/PracDistance.htm&docid=RSUHYWfBZ7VDMM&imgurl=http://www.regentsprep.org/Regents/math/geometry/GCG3/graph4.gif&w=361&h=341&ei=wWmaUO_LKpLc8ATfsYDQAw&zoom=1&iact=hc&vpx=699&vpy=397&dur=270&hovh=218&hovw=231&tx=153&ty=112&sig=107197431914939767308&page=3&tbnh=128&tbnw=140&start=40&ndsp=27&ved=1t:429,r:16,s:40,i:274)