Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Teacher: A. Zito Lakeside Academy MYP3

**Analytical Geometry Notes**

Change in x and Change in y

Ordered Pairs: $(x,y)$

$Δ$ Delta: means change

$Δx $refers to the change in $x$

$Δy $refers to the change in $y$

Mathematically we can calculate the change in x and y between two points as follows.

$Δx=x\_{2}-x\_{1}$ $Δy=y\_{2}-y\_{1}$

|  |
| --- |
| Where we **START** and STOP **MATTERS!!!** |

Find the change in x and the change in y from $Point A $to B



|  |  |
| --- | --- |
| **From** $A$ **to** $B$  | $A(2,1) $ $B(7,6)$ $x\_{1} y\_{1}$ $ x\_{2} y\_{2}$ |

|  |  |  |  |
| --- | --- | --- | --- |
|  | $Δx=x\_{2}-x\_{1}$$=\left(7\right)-\left(2\right)$$= 5$ | $Δy=y\_{2}-y\_{1}$$=\left(6\right)-\left(1\right)$$= 4$ | This means that in order to move from $Point A$to $Point B$, we must travel 5 units to the right on the x-axis and 4 unit up on the y-axis. |

Find the change in x and the change in y from $Point B $to $Point A$



|  |  |
| --- | --- |
| **From** $B$ **to** $A$  | $A(2,1) $ $B(7,6)$ $x\_{2} y\_{2}$ $ x\_{1} y\_{1}$ |

|  |  |  |  |
| --- | --- | --- | --- |
|  | $Δx=x\_{2}-x\_{1}$$=\left(2\right)-\left(7\right)$$= -5$ | $Δy=y\_{2}-y\_{1}$$=\left(6\right)-\left(1\right)$$= -4$ | This means that in order to move from $Point B$to $Point A$, we must travel 5 units to the left on the x-axis and 4 unit down on the y-axis. |