1

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Course Code: AS121

Course Title: Calculus and Analytic Geometry.

Quiz: I

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Question No-1

1 A(-3, 2), B(-1, -2)

Solution:

$\because \Delta x = x_B - x_y$

$= \Delta x = -1 - (-3)$

$= \boxed{\Delta x = 2}$

$\because \Delta y = y_B - y_A$

$= \Delta y = -2 - 2$

$= \boxed{\Delta y = -4}$

for Distance:

$d = \sqrt{(\Delta x)^2 + (\Delta y)^2}$

So,

$d = \sqrt{(2)^2 + (-4)^2}$

$d = \sqrt{4+16}$

$d = \sqrt{20}$

$\boxed{d = 2\sqrt{5}}$ Ans.

2 $A(-1,-2), B(-3;2)$

Solution:

$\Delta x = -3-(-1)$

$\boxed{\Delta x = -2}$

$\Delta y = 2-(-2)$

$\boxed{\Delta y = 4}$

for Distance

$d = \sqrt{(-2)^2+(4)^2}$

$d = \sqrt{4+16}$

$d = \sqrt{20}$

$\boxed{d = 2\sqrt{5}}$

3 $A(-3.2,-2), B(-8.1,-2)$

Solution:

$\Delta x = -8.1-(-3.2)$

$\boxed{\Delta x = -4.9}$

$\Delta y = -2 - (-2)$

$\boxed{\Delta y = 0}$

Distance

$d = \sqrt{(-4.9)^2 + (0)^2}$

$d = \sqrt{24.01}$

$\boxed{d = 4.9}$

$A(\sqrt{2}, 4), B(0, 1.5)$

Solution

$\Delta x = 0 - \sqrt{2}$

$\boxed{\Delta x = -\sqrt{2}}$

$\Delta y = 1.5 - 4$

$\boxed{\Delta y = -2.5}$

Distance

$d = \sqrt{(-\sqrt{2})^2 + (-2.5)^2}$

$d = \sqrt{2 + 6.25}$

$d = \sqrt{8.25}$

$\boxed{d = 2.872}$