**Task 1: The Midpoint Formula**

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**VERTICAL LINE SEGMENTS**

**What is the midpoint of the line segment AB?**

A (-6, 9)

B (-6, 3)

 M ( , )

**How can the midpoint be determined using a mathematical calculation instead of counting the number of squares?**

**Answer:**

**HORIZONTAL LINE SEGMENTS**

**What is the midpoint of the line segment AB?**

A (2, 1)

B (8, 1)

 M ( , )

**How can the midpoint be determined using a mathematical calculation instead of counting the number of squares?**

**Answer:**

**DIAGONAL LINE SEGMENTS**

**What is the midpoint of the line segment AB?**

A (3, 2)

B (7, 8)

**First, find the values**

**Next, find the values**

**Midpoint = ( , )**

**Summary:**

|  |
| --- |
| **Formula for the Midpoint of a Line Segment:** midpoint = midpoint =  |

**Task 2: Practice**

Find the Midpoint of the pair of co-ordinates given below:

1. ,

**M=**

**=**

 **=( , ) Therefore:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. ,
2. ,

**Task 3: Application**

M is the midpoint of line segment UP. The coordinates of U are (-2, 3) and the coordinates of M

are (1, 0). Find the coordinates of P.

 