**5A Partitioning Line Segments NOTES** Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Midpoint Formula = **

The **midpoint** divides or “**partitions**” a segment in **half**, so the lengths have a **ratio** of **1 : 1.**

1. A is at -2 and B is at 7. Find the point, T, so that T partitions A to B in a 1:2 ratio.

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 Find the point P that partitions AB in a ratio of 1:2

 Point P is \_\_\_\_\_\_\_\_(fraction) of the way from A to B.

 Find the point  of the way from M to N.

 What is the ratio? \_\_\_\_\_\_\_\_

 M = \_\_\_\_\_\_\_ P=\_\_\_\_\_\_\_

 Point \_\_\_\_\_\_\_\_\_\_

1. Find the midpoint of $\overbar{AB}$, where A(-12, 18) and B(-6, 24). Ratio = \_\_\_\_\_\_\_\_

Point\_\_\_\_\_\_\_\_\_\_\_

2. Find the point P that partitions the line segment $\overbar{AB}$ in the given ratio.

  Ratio 1 : 3

Point \_\_\_\_\_\_\_\_

3. Find the point that is  the distance from the endpoint (-4, -6) of the segment with endpoint (-4, -6) and (2, 9). Ratio = \_\_\_\_\_\_\_\_

Point \_\_\_\_\_\_\_\_