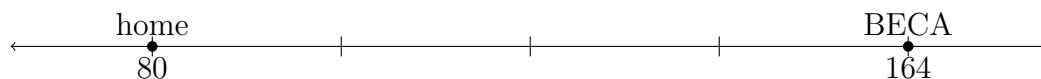


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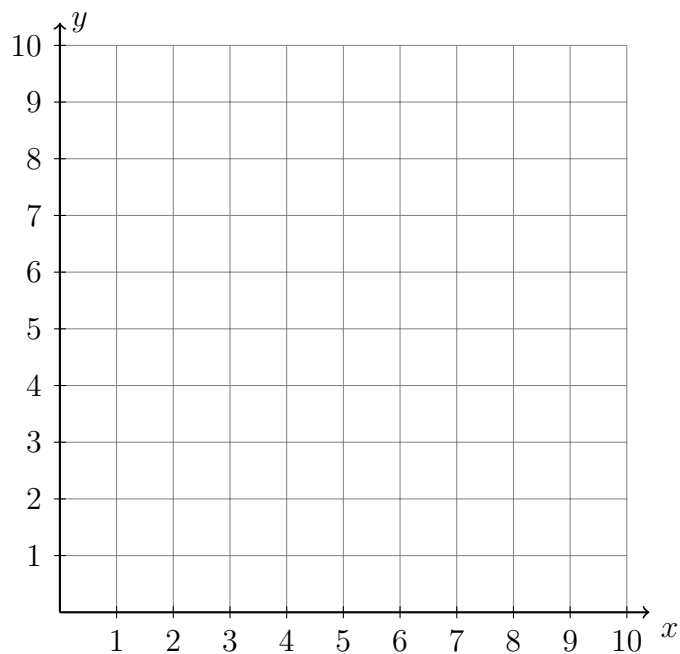
BECA / Dr. Huson / Geometry 04 Analytic Geometry

4.3 Partitioning a line segmentThe distance formula: $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

1. Do Now: Dr. Huson's commute is from 80th Street to 164th Street.
 - (a) On what block is he half way? Mark it and label it with the street number.
 - (b) On the way to work, mark and label the block when he is three-quarters of the way to BECA.



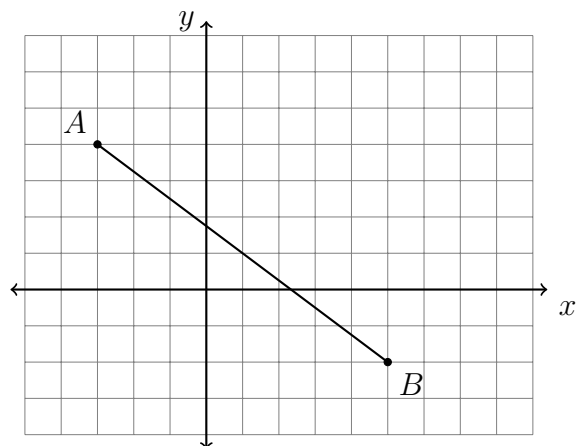
2. On the graph, draw polygon ABCDEF with vertices A(1, 1), B(1, 4), C(3, 4), D(3, 7), E(8, 7), and F(8, 1). Find the perimeter and the area of the polygon.



3. In the diagram below, \overline{AB} has endpoints with coordinates $A(-3, 4)$ and $B(5, -2)$.

(a) Find the coordinates of the midpoint M of \overline{AB} . Mark and label it on the graph.

(b) Find the length AB



4. Find each pair of numbers with the given sum.

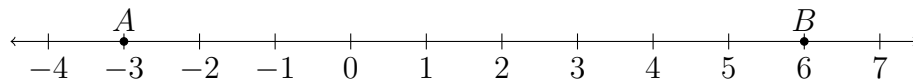
(a) Example: Two numbers with a ratio of $3 : 1$ that sum to 20 are $15 : 5$.

(b) $2 : 1$, sum 9

(c) $1 : 1$, sum 100

(d) $2 : 3$, sum 20

5. Divide (partition) \overline{AB} , $A = -3$ and $B = 6$, into three equal parts. Mark and label the dividing points P and Q .



6. Partition \overline{MN} , $M = -3$ and $N = 5$, in the ratio $3 : 1$ with point P .

