Section _____
Due: 11/8/12

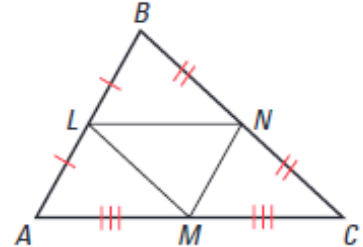## 5-4 Worksheet

For problems 1-8, use $\triangle ABC$, where L, M, and N are midpoints of the sides.

1) $\overline{LM} \parallel$ _____

2) $\overline{AB} \parallel$ _____

3) If $AC = 20$, then $LN =$ _____

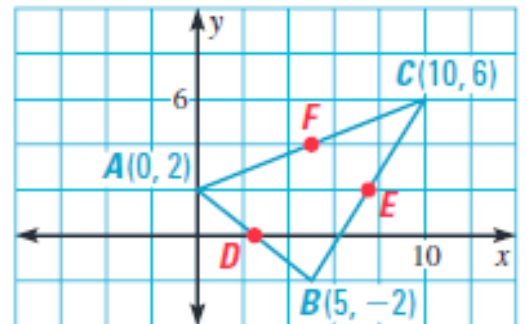4) If $MN = 7$, then $AB =$ _____

5) If $NC = 9$, then $LM =$ _____

6) If $LM = 3x + 7$ and $BC = 7x + 6$, then $LM =$ _____

7) If $MN = x - 1$ and $AB = 6x - 18$, then $AB =$ _____

8) Which angles in the diagram are congruent? Explain your reasoning.

Use the diagram for 9 & 10.

9) Find the coordinates of the endpoints of each midsegment of $\triangle ABC$.

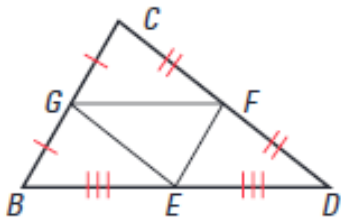10) Use slope and the Distance Formula to verify that the Midsegment Theorem is true for $\overline{DF}$.

In problems 11 & 12, you are given the midpoints of the sides of a triangle. Find the coordinates of the vertices of the triangle.

11) $L(1, 3)$, $M(5, 9)$, $N(4, 4)$

12) $L(7, 1)$, $M(9, 6)$, $N(5, 4)$

Use the diagrams shown for problems 13 & 14.

13) Given $CD = 14$, $GF = 8$, and $GC = 5$, find the perimeter of $\triangle BCD$.

C
G   F
B   E   D

14) Given $PQ = 20$, $SU = 12$, and $QU = 9$, find the perimeter of $\triangle STU$.

P   T   R
S   U
Q