Practice 5-1
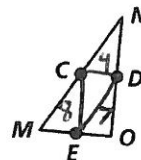
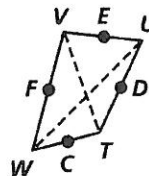**Midsegments of Triangles**

Use the diagrams at the right to complete the exercises.
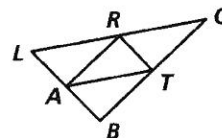
1. In $\triangle MNO$, the points C, D, and E are midpoints. $CD = 4$ cm, $CE = 8$ cm, and $DE = 7$ cm.

   a. Find MO.

   8

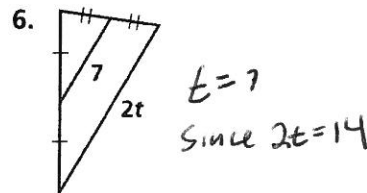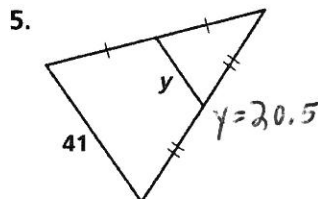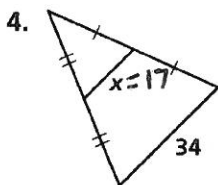   b. Find NO.

   16

   c. Find MN.

   14

2. In quadrilateral $WVUT$, the points F, E, D, and C are midpoints. $WU = 45$ in. and $TV = 31$ in.

   a. Find CD.

   22.5

   b. Find CF.
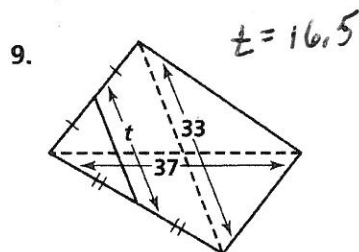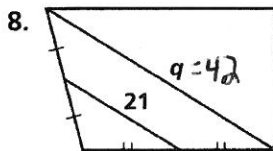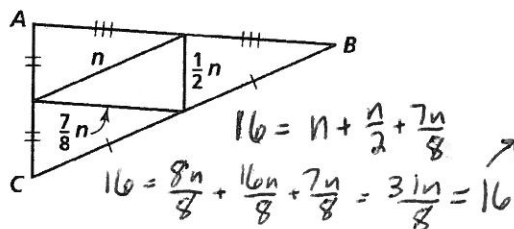
   15.5

   c. Find ED.

   15.5

3. In $\triangle LOB$, the points A, R, and T are midpoints. $LB = 19$ cm, $LO = 35$ cm, and $OB = 29$ cm.

   a. Find RT.

   9.5

   b. Find AT.

   17.5

   c. Find AR.

   14.5
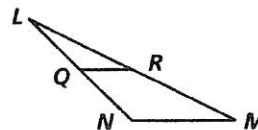
Find the value of the variable.

4. $x = 17$

   34

5. y

   $y = 20.5$

   41

6. 7

   $2t$

   $t = 7$

   Since $2t = 14$

   $t = 16.5$

7. Perimeter of $\triangle ABC = 32$ cm

   n, $\frac{1}{2}n$, $\frac{7}{8}n$

   $16 = n + \frac{n}{2} + \frac{7n}{8}$

   $16 = \frac{8n}{8} + \frac{16n}{8} + \frac{7n}{8} = \frac{31n}{8} = 16$

   $n = 4.1$

8. 21

   $q = 42$

9. t 33

   37

10. $\overline{QR}$ is a midsegment of $\triangle LMN$.

    a. $QR = 9$. Find NM. 18

    b. $LN = 12$ and $LM = 31$. Find the perimeter of $\triangle LMN$.

    61

Use the given measures to identify three pairs of parallel segments in each diagram.

11.

   B 4 7

   G H

   4 7

   A 6 I 6 C

12.

   Y

   P Q

   X R Z