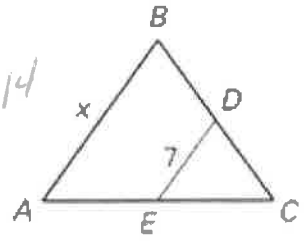
Name _____ Date _____

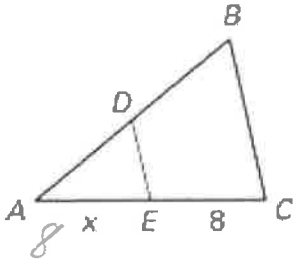
$\overline{DE}$ is a midsegment of $\triangle ABC$. Find the value of x.

1.



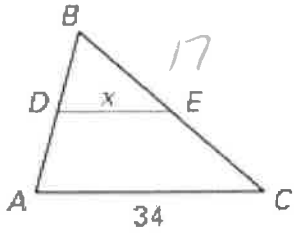
14

2.



8

3.



17

In $\triangle JKL$, $\overline{JR} \cong \overline{RK}$, $\overline{KS} \cong \overline{SL}$, and $\overline{JT} \cong \overline{TL}$. Copy and complete the statement.

4. $\overline{RS} \parallel$? $\overline{JL}$

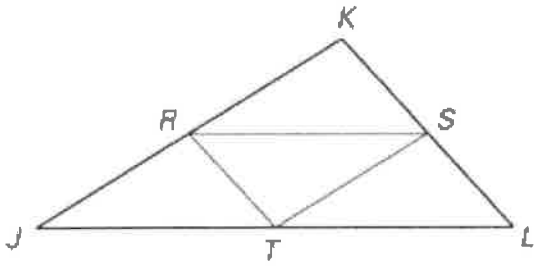
5. $\overline{ST} \parallel$? $\overline{KJ}$

6. $\overline{KL} \parallel$? $\overline{RT}$

7. $\overline{SL} \cong$ $\overline{KS}$? $\cong$? $\overline{RT}$

8. $\overline{JR} \cong$ $\overline{RK}$? $\cong$? $\overline{ST}$

9. $\overline{JT} \cong$ $\overline{JL}$? $\cong$? $\overline{RS}$



Use $\triangle GHJ$, where D, E, and F are midpoints of the sides.

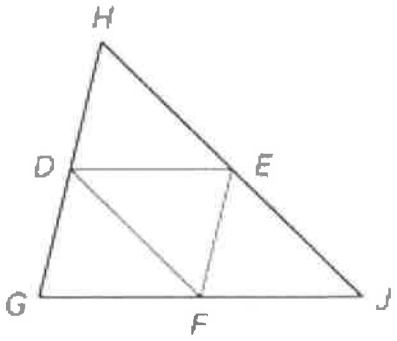
14. If $DE = 4x + 5$ and $GJ = 3x + 25$, what is DE? 17

15. If $EF = 2x + 7$ and $GH = 5x - 1$, what is EF? 37

16. If $HJ = 8x - 2$ and $DF = 2x + 11$, what is HJ? 46

$2(4x+5) = 3x+25$

$x = 3$



Use the diagram of $\triangle ABC$ where D, E, and F are the midpoints of the sides.

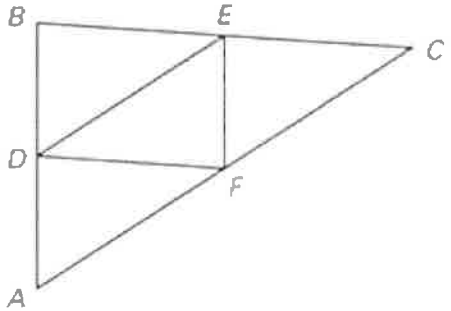
5. If $FE = 6.5x - 10$ and $AB = 3x + 20$, then AB = ? 32

6. If $DF = 3.5x + 6$ and $BC = 3x + 36$, then DF = ? 27

$2(6.5x - 10) = 3x + 20$

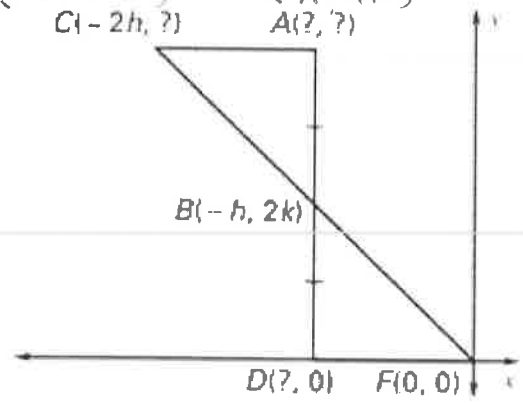
$x = 4$

$AB = 32$



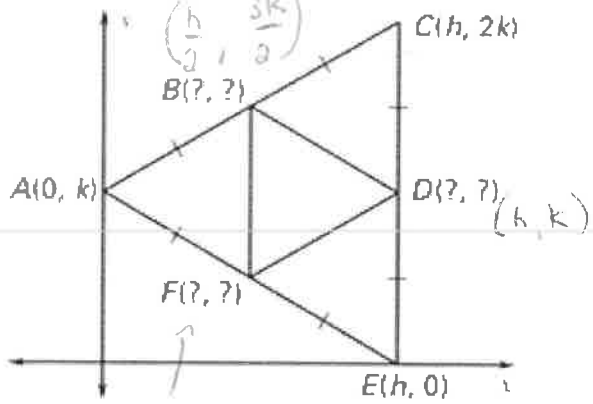
Find the unknown coordinates of the points in the figure.

7. $(-2h, 4k)$ $(-h, 4k)$



$(-h, 0)$

8. $\left(\frac{h}{2}, \frac{3k}{2}\right)$



(h, k)

$\left(\frac{h}{2}, \frac{k}{2}\right)$