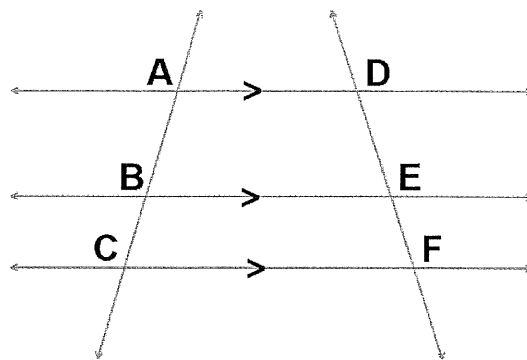


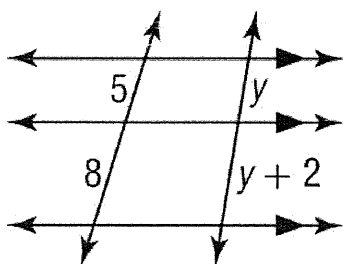
## 7-4b Parallel Lines and Proportional Parts

### Corollary: Proportional Parts of Parallel Lines

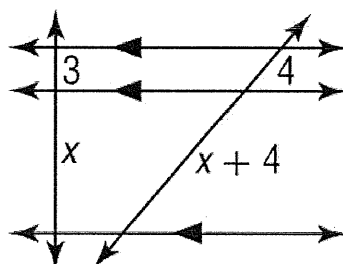


Ex) Solve for  $x$  or  $y$ .

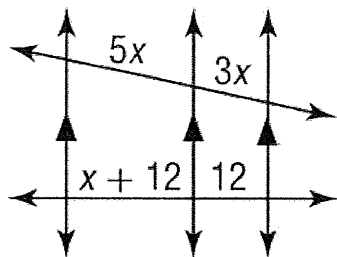
1.



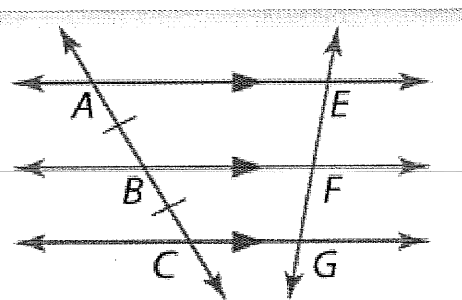
2.



3.

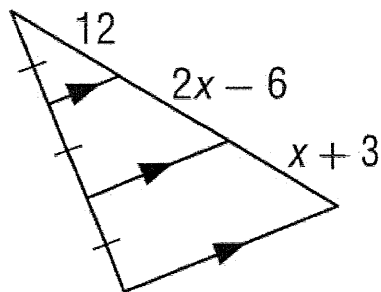


Corollary: Congruent Parts of Parallel Lines

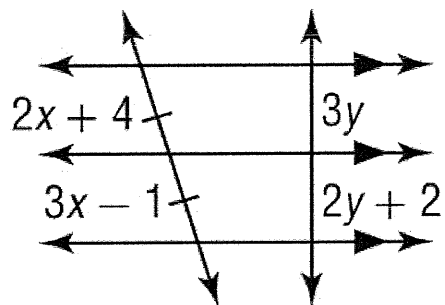


Ex) Solve for x and y.

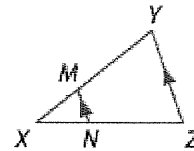
4.



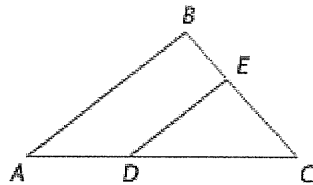
5.



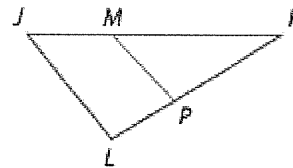
- If  $XM = 4$ ,  $XN = 6$ , and  $NZ = 9$ , find  $XY$ .
- If  $XN = 6$ ,  $XM = 2$ , and  $XY = 10$ , find  $NZ$ .



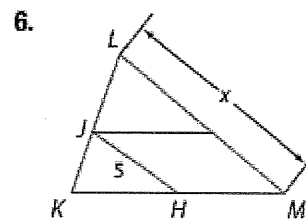
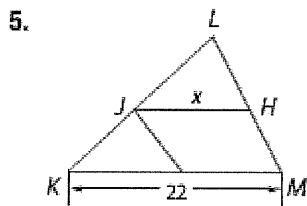
- In  $\triangle ABC$ ,  $BC = 15$ ,  $BE = 6$ ,  $DC = 12$ , and  $AD = 8$ . Determine whether  $\overline{DE} \parallel \overline{AB}$ . Justify your answer.



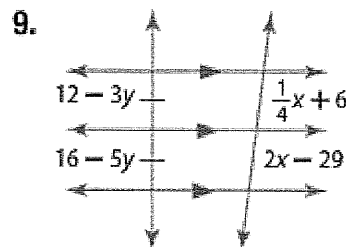
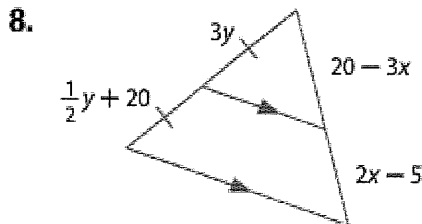
- In  $\triangle JKL$ ,  $JK = 15$ ,  $JM = 5$ ,  $LK = 13$ , and  $PK = 9$ . Determine whether  $\overline{JL} \parallel \overline{MP}$ . Justify your answer.



$\overline{JH}$  is a midsegment of  $\triangle KLM$ . Find the value of  $x$ .

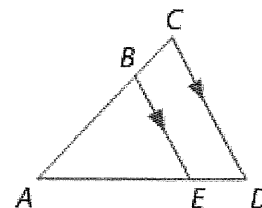


**ALGEBRA** Find  $x$  and  $y$ .



**and Problem Solving**

- If  $AB = 6$ ,  $BC = 4$ , and  $AE = 9$ , find  $ED$ .
- If  $AB = 12$ ,  $AC = 16$ , and  $ED = 5$ , find  $AE$ .
- If  $AC = 14$ ,  $BC = 8$ , and  $AD = 21$ , find  $ED$ .
- If  $AD = 27$ ,  $AB = 8$ , and  $AE = 12$ , find  $BC$ .



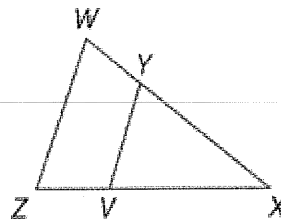
Determine whether  $\overline{VY} \parallel \overline{ZW}$ . Justify your answer.

14.  $ZX = 18, ZV = 6, WX = 24,$  and  $YX = 16$

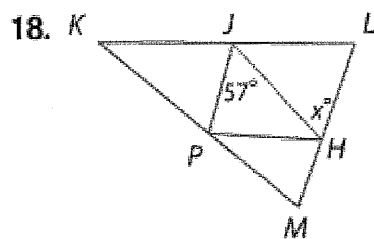
15.  $VX = 7.5, ZX = 24, WY = 27.5,$  and  $WX = 40$

16.  $ZV = 8, VX = 2,$  and  $YX = \frac{1}{2}WY$

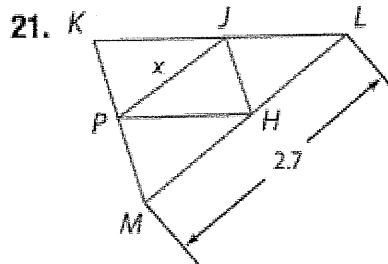
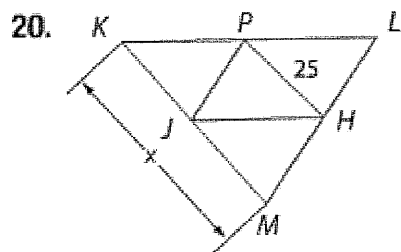
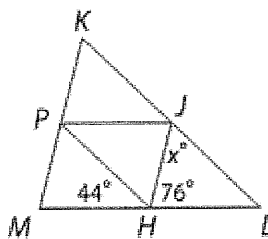
17.  $WX = 31, YX = 21,$  and  $ZX = 4ZV$



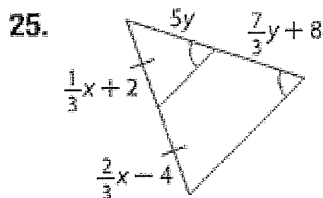
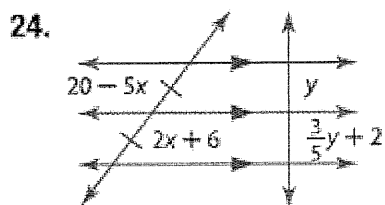
$\overline{JH}, \overline{JP},$  and  $\overline{PH}$  are midsegments of  $\triangle KLM$ . Find the value of  $x$ .



19



ALGEBRA Find  $x$  and  $y$ .



ALGEBRA Find  $x$  and  $y$ .

