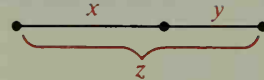
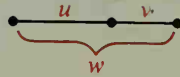


## Classroom Exercises

1. The two segments are divided proportionally. State several correct proportions.

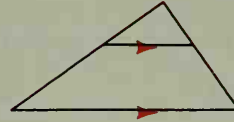


2. Complete the proportions stated informally below.

$$\frac{\text{lower left}}{\text{whole left}} = \frac{\text{lower right}}{?}$$

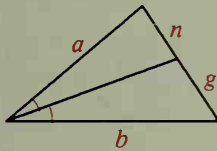
$$\frac{\text{upper left}}{\text{lower left}} = \frac{?}{?}$$

$$\frac{\text{upper left}}{\text{whole left}} = \frac{\text{upper parallel}}{?} = \frac{?}{?}$$

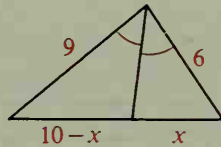


State a proportion for each diagram.

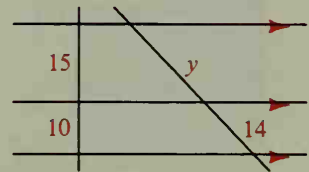
3.



4.

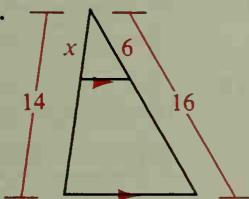


5.

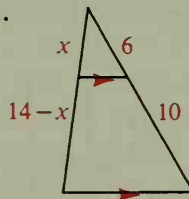


6. Suppose you want to find the length of the upper left segment in the diagram at the right. Three methods are suggested below. Complete each solution.

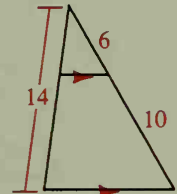
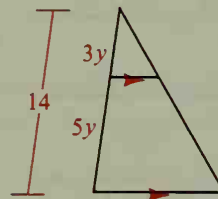
a.



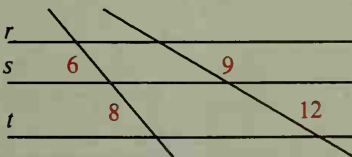
b.



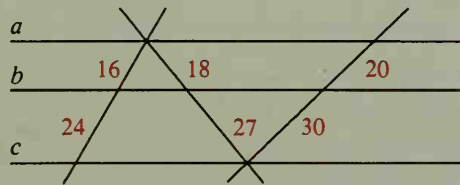
c.



7. Explain why the expressions  $3y$  and  $5y$  can be used in Exercise 6(c).
8. The converse of the corollary of the Triangle Proportionality Theorem is: If three lines divide two transversals proportionally, then the lines are parallel. Is the converse true? (Hint: Can you draw a diagram with lengths like those shown below, but in which lines  $r$ ,  $s$ , and  $t$  are not parallel?)



Ex. 8



Ex. 9

9. Must lines  $a$ ,  $b$ , and  $c$  shown above be parallel? Explain.