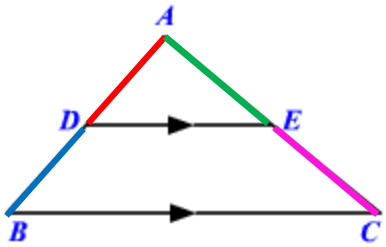
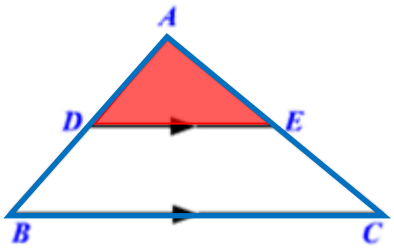
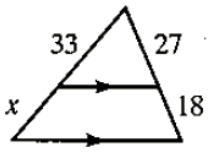
Additional 6.5 Notes

Triangle Proportionality	Similar Triangles
Compares the *pieces* of the triangle that are cut by the parallel lines →Think of the figure as one big triangle cut into parts.  Top Piece → $\frac{AD}{DB} = \frac{AE}{EC}$ Bottom Piece →	Compares the *full sides* lengths of the triangles →Think of the figure as two triangles, a big one and a little one.  Little Triangle → $\frac{AD}{AB} = \frac{DE}{BC}$ Big Triangle →

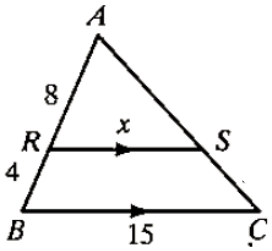
Examples

1.



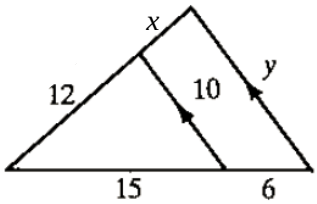
$$\frac{33}{x} = \frac{27}{18}$$
$$x = 22$$

2.



$$\frac{x}{15} = \frac{8}{12}$$
$$x = 10$$

3.



Triangle Proportionality Theorem: $\frac{12}{x} = \frac{15}{6}$

$$x = 4.8$$

Similar Triangles: $\frac{10}{y} = \frac{15}{21}$

$$y = 14$$