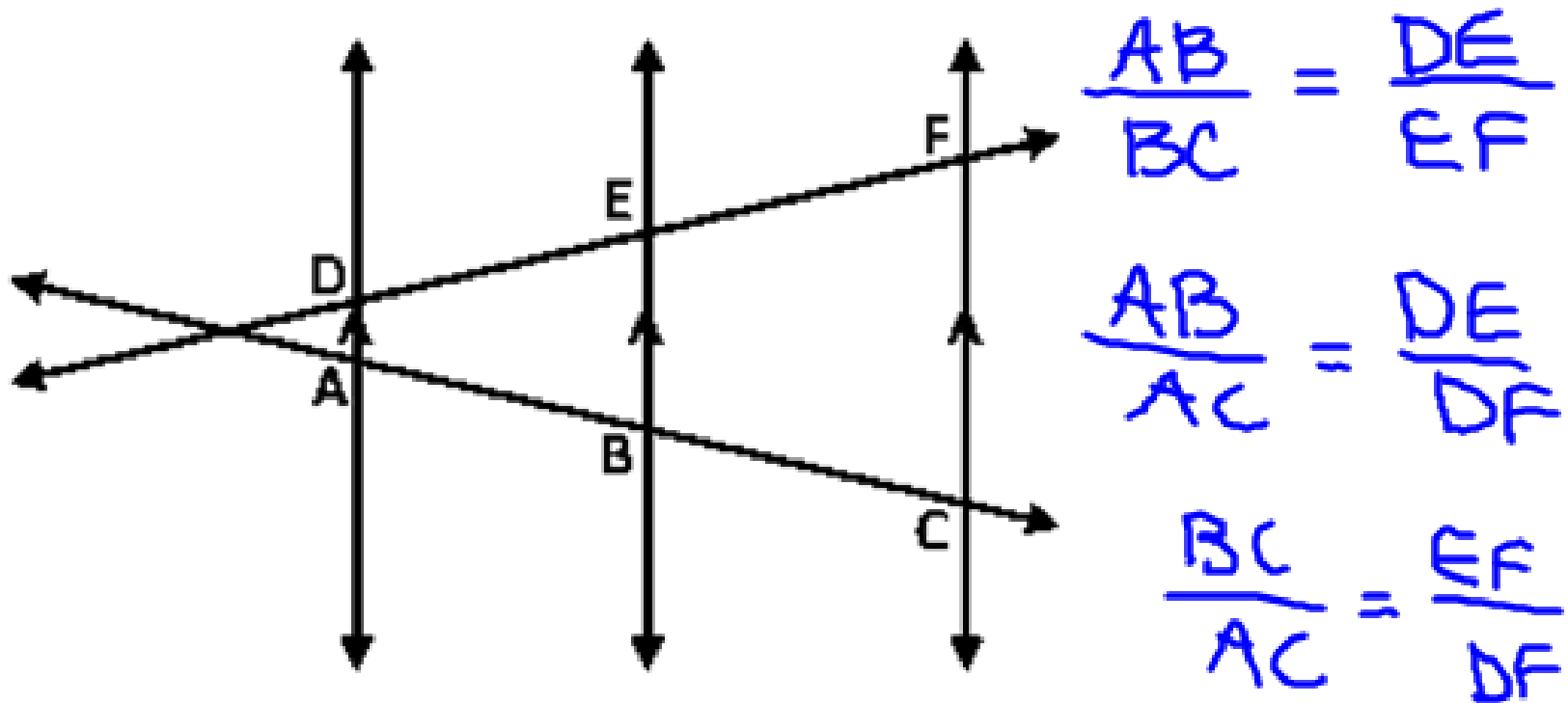


6 - 4

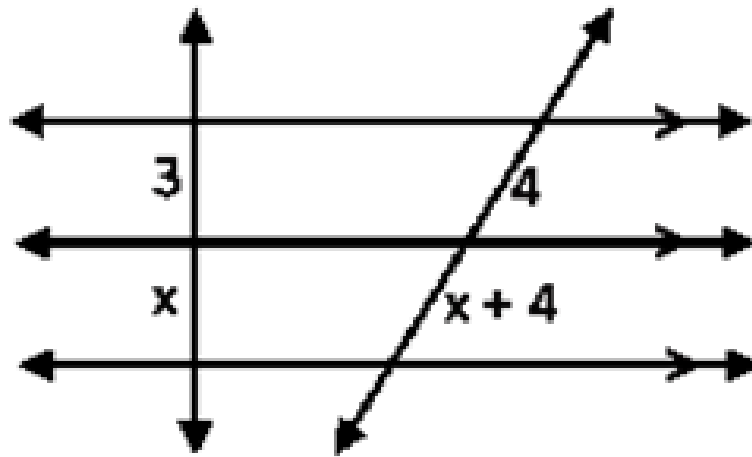
**Parallel Lines and
Proportional Parts (Day Two)**

Corollary 6.1:

If 3 or more parallel lines intersect 2 transversals, then they cut the transversals proportionally.



Ex: Solve for x.

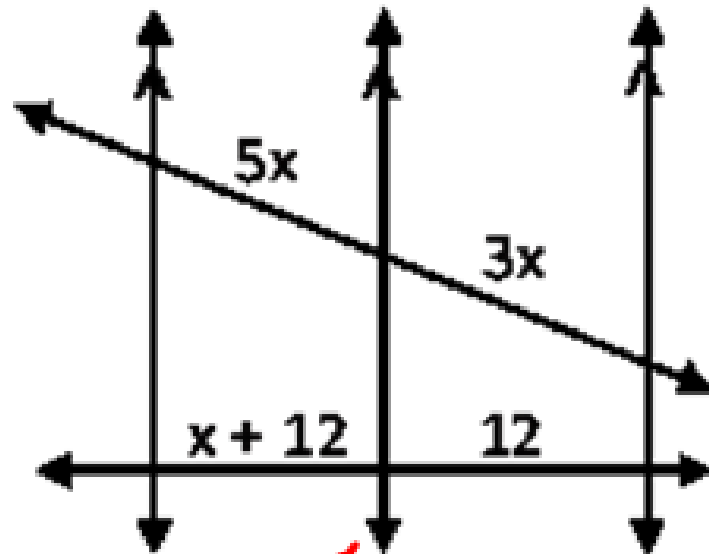


$$\frac{3}{x} = \frac{4}{x+4}$$

$$3x + 12 = 4x$$

$$12 = x$$

Ex: Solve for x.



$$\frac{5x}{3x} = \frac{x+12}{12}$$

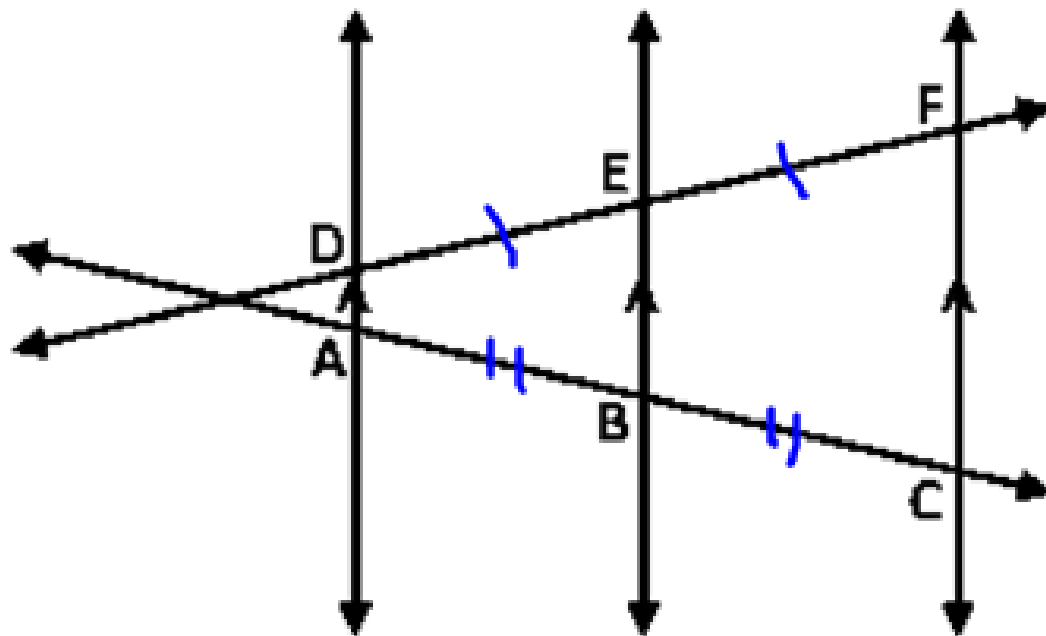
$$x = 8$$

$$3x + 36 = 60$$
$$\begin{array}{r} -36 \\ -36 \end{array}$$

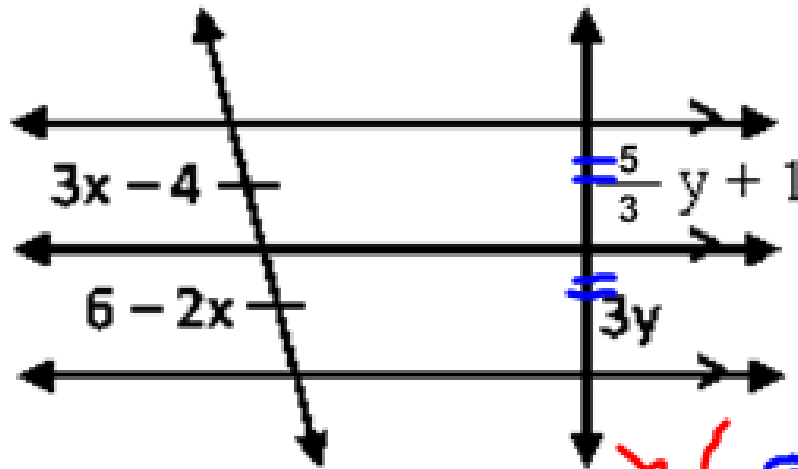
$$3x = 24$$
$$\frac{3x}{3} = \frac{24}{3}$$

Corollary 6.2:

If 3 or more parallel lines cut off congruent segments on one transversal, then they cut off congruent segments on every transversal.



Ex: Solve for x and y.



$$3x - 4 = 6 - 2x$$

$+2x$ (written below the $-2x$)

$$5x - 4 = 6$$

$+4$ (written below the -4)

$$5x = 10$$

$$x = 2$$

$$3\left(\frac{5}{3}y + 1\right) = (3y)3$$

$$5y + 3 = 9y$$

$-5y$ (written below the $5y$)

$$4 = 4y$$

$\div 4$ (written above the 4)

$$1 = y$$

Homework:

p.312 #14 - 20 even, 33, 34