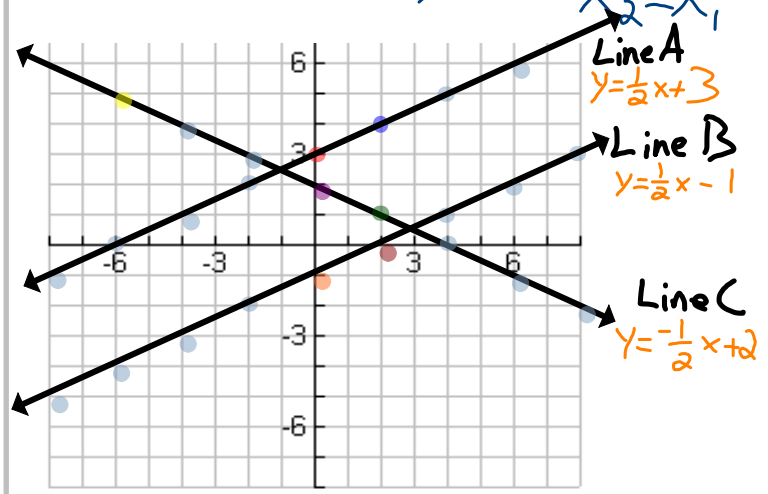
4.7 cont. **Nov.17, 2006**

Parallel Lines: different Lines in the Same Plane that never intersect.

Line A	Line B	Line C
$-x+2y=6$	$-x+2y=-2$	$x+2y=4$
$+x \quad +x$	$+x \quad +x$	$-x \quad -x$
$\frac{2y}{2}=\frac{x+6}{2}$	$\frac{2y}{2}=\frac{x-2}{2}\frac{2}{2}$	$\frac{2y}{2}=\frac{-x+4}{2}\frac{2}{2}$
$y=\frac{1}{2}x+3$	$y=\frac{1}{2}x-1$	$y=\frac{1}{2}x+2$
$y=mx+b$	$y=mx+b$	$y=mx+b$
$m=\text{slope}=\frac{\text{rise}}{\text{run}}=\frac{1}{2}\ \frac{\text{Up 1}}{\text{Rt 2}}$	$m=\text{slope}=\frac{\text{rise}}{\text{run}}=\frac{1}{2}\ \frac{\text{up 1}}{\text{Rt 2}}$	$m=\text{slope}=\frac{\text{rise}}{\text{run}}=\frac{-1}{2}\ \frac{\text{Dn 1}}{\text{Rt 2}}$
$b=y\text{-int.}=3 \Rightarrow (0,3)$	$b=y\text{-int.}=-1 \Rightarrow (0,-1)$	$b=y\text{-int.}=2 \Rightarrow (0,2)$

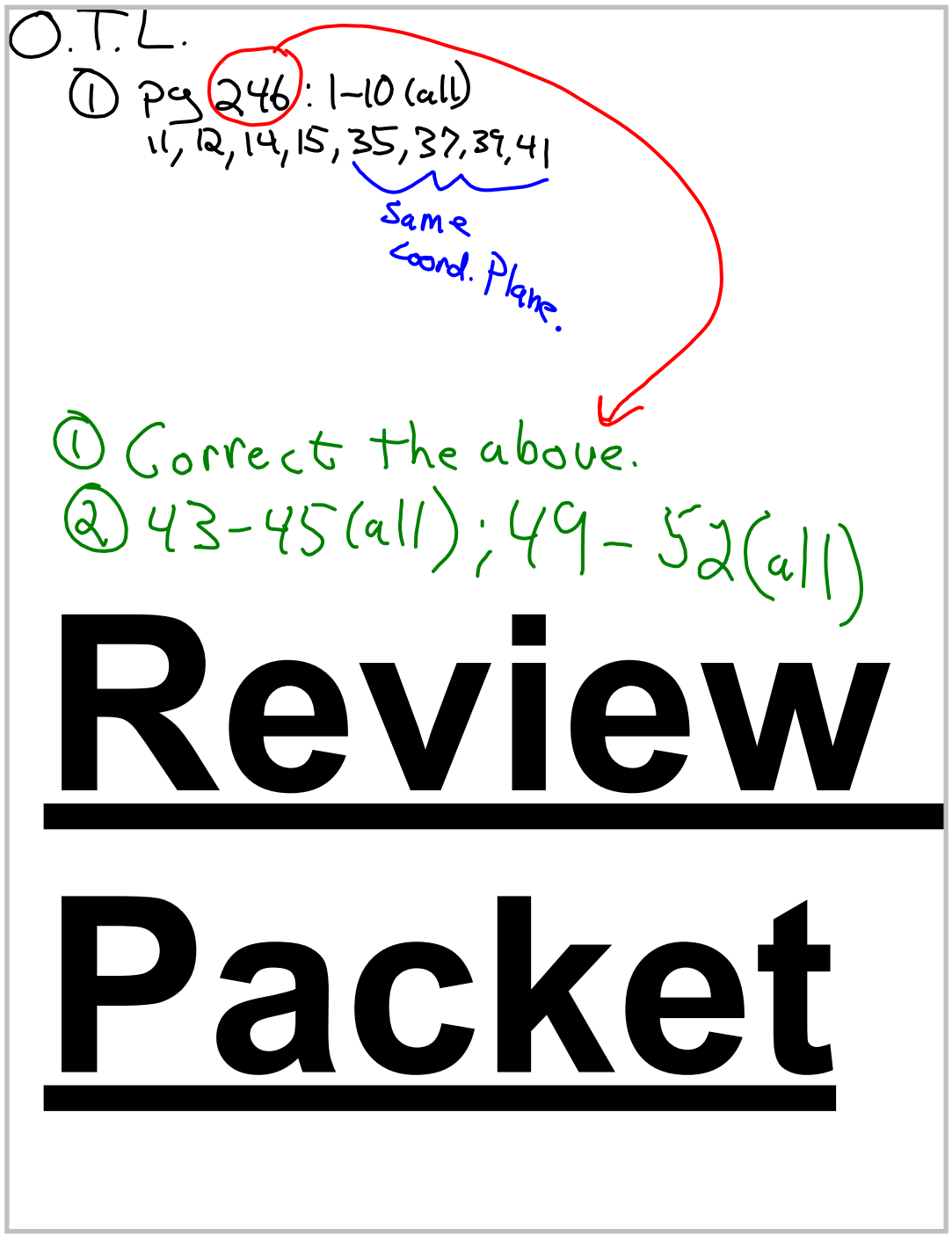
$$m=\text{slope}=\frac{\text{rise}}{\text{run}}=\frac{\text{change in } y}{\text{change in } x}=\frac{y_2-y_1}{x_2-x_1}$$



Which are Parallel?

Lines A + Line B

Why? Because they have the Same Slope of $\frac{1}{2}$ & different y-int. $\triangleq$ they are on the Same Plane!


O.T.L.
① Pg 246: 1-10 (all)
11, 12, 14, 15, 35, 37, 39, 41
Same Coord. Plane.
① Correct the above.
② 43-45 (all); 49-52 (all)
Review
Packet