3.42 For plane A since the plane passes through the origin of the coordinate system as shown, we will move the origin of the coordinate system one unit cell distance vertically along the z axis; thus, this is a $(21\bar{1})$ plane, as summarized below.

	$\underline{x}$	$\underline{y}$	$\underline{z}$
Intercepts	$\dfrac{a}{2}$	b	$-c$
Intercepts in terms of a, b, and c	$\dfrac{1}{2}$	1	-1
Reciprocals of intercepts	2	1	-1
Reduction		not necessary	
Enclosure		$(21\bar{1})$	

For plane B, since the plane passes through the origin of the coordinate system as shown, we will move the origin one unit cell distance vertically along the z axis; this is a $(02\bar{1})$ plane, as summarized below.

	$\underline{x}$	$\underline{y}$	$\underline{z}$
Intercepts	$\infty\, a$	$\dfrac{b}{2}$	$-c$
Intercepts in terms of a, b, and c	∞	$\dfrac{1}{2}$	-1
Reciprocals of intercepts	0	2	-1
Reduction		not necessary	
Enclosure		$(02\bar{1})$	