

PROJECT			POSITION COMPUTATION, _____ ORDER TRIANGULATION (For calculating machine computation) For use of this form, see FM 3-34.331; the proponent agency is TRADOC.																	
LOCATION			ORGANIZATION												DATE (YYYYMMDD)					
			°	'	"											°	'	"		
<i>a</i>	2	To 3				<i>a</i>	3	To 2												
$2^d \angle$		&	+			$3^d \angle$		&								—				
<i>a</i>	2	To 1				<i>a</i>	3	To 1												
Δa						Δa														
			180	00	00.00											180	00	00.00		
<i>a'</i>	1	To 2				<i>a'</i>	1	To 3												
First Angle of Triangle																				
°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"			
ϕ			2			λ			ϕ			3			λ					
			s=			$\Delta \lambda$						s=			$\Delta \lambda$					
ϕ'			1			λ'			ϕ'			1			λ'					
$\Delta \phi$				$(\log s = b = (y/10,000)2)$				$\Delta \phi$				$(\log s = b = (y/10,000)2)$								
$\sin a$				$x \text{ cor.} = -\frac{1}{2} fb$				$\sin a$				$x \text{ cor.} = -\frac{1}{2} fb$								
$\cos a$				x'				$\cos a$				x'								
$x = s \sin a$				H				$x = s \sin a$				H								
$y = -s \cos a$				$Hx' = (\text{approx. } \Delta \lambda'')$				$y = -s \cos a$				$Hx' = (\text{approx. } \Delta \lambda'')$								
$a = (x'/10,000)^2$				$\text{Arc-sin } \frac{V(Va)}{\text{cor}} = + \frac{V(Va)}{15}$				$a = (x'/10,000)^2$				$\text{Arc-sin } \frac{V(Va)}{\text{cor}} = + \frac{V(Va)}{15}$								
$y \text{ cor.} = +fa$				$\underline{\Delta \lambda''}$				$y \text{ cor.} = +fa$				$\underline{\Delta \lambda''}$								
y_{\circ}				$\sin \phi$				y_{\circ}				$\sin \phi$								
y'				$\sin \phi'$				y'				$\sin \phi'$								
y_1				$1 + \cos \Delta \phi$				y_1				$1 + \cos \Delta \phi$								
$Va -$				$\frac{\sin \phi + \sin \phi'}{1 + \cos \Delta \phi} \text{ or } \sin \phi_m$				$Va -$				$\frac{\sin \phi + \sin \phi'}{1 + \cos \Delta \phi} \text{ or } \sin \phi_m$								
y_2				$-\Delta a'' (\text{approx.})$				y_2				$-\Delta a'' (\text{approx.})$								
V				$+ F(\Delta \lambda'')^3$				V				$+ F(\Delta \lambda'')^3$								
$K(Va/1,000)^2 +$				$-\Delta a''$				$K(Va/1,000)^2 +$				$-\Delta a''$								
COMPUTED BY			DATE (YYYYMMDD)			CHECKED BY			DATE (YYYYMMDD)			NOTE: For <i>s</i> , under 8,000 meters omit terms under the heavy black line not in heavy bold type or underlined.								