Interval arithmetic

	function	lower bound	upper bound	scale	
probability	p	w^-	w^+	$\boldsymbol{P}$	Gaussian
reciprocal	$1/p$	$1/w^+$	$1/w^-$	$\boldsymbol{P^{-1}}$	inverse Gaussian
alternate	$q = 1 - p$	$1 - w^+$	$1 - w^-$	$\boldsymbol{P}$	
weighted	kp	kw^-	kw^+	$\boldsymbol{P} \times k$	weighted Gaussian
square	p^2	$(w^-)^2$	$(w^+)^2$	$\boldsymbol{P^2}$	squared Gaussian
logit	logit(p)	logit(w^-)	logit(w^+)	$\mathfrak{R}$	Gaussian – (0 or 1)
increasing	$fn(p)$	$fn(w^-)$	$fn(w^+)$		
decreasing		$fn(w^+)$	$fn(w^-)$		
non-monotonic		min($fn(w^- \ldots w^+)$)	max($fn(w^- \ldots w^+)$)		
independent proportions				–	applicable to Gaussian, same scale only
difference	$p_1 - p_2$	$p_1 - p_2 - \sqrt{(w_1^+ - p_1)^2 + (p_2 - w_2^-)^2}$	$p_1 - p_2 + \sqrt{(p_1 - w_1^-)^2 + (w_2^+ - p_2)^2}$		
sum	$p_1 + p_2$	$p_1 + p_2 - \sqrt{(p_1 - w_1^-)^2 + (p_2 - w_2^-)^2}$	$p_1 + p_2 + \sqrt{(w_1^+ - p_1)^2 + (w_2^+ - p_2)^2}$		
sum	Σp_i	$\Sigma p_i - \sqrt{\sum (p_i - w_i^-)^2}$	$\Sigma p_i + \sqrt{\sum (w_i^+ - p_i)^2}$		
dependent proportions				–	where $p_2 = fn(p_1)$
difference	$p_1 - p_2$	${w_1}^- - {w_2}^+$	${w_1}^+ - {w_2}^-$		
sum	$p_1 + p_2$	${w_1}^- + {w_2}^-$	${w_1}^+ + {w_2}^+$		
product	$p_1 \times p_2$	${w_1}^- \times {w_2}^-$	${w_1}^+ \times {w_2}^+$		