

How to calculate Leave Entitlement

[1.0]



QNE TIPS

Product : QNE Optimum

Version: 1.00

Doc No : 1

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REV. No	Nature of Change	Prepared By	Prepared Date	Reviewed & Approved by
1.0	How to calculate Leave Entitlement	Kiat	20/11/2020	

Amendment Record

SCENARIO

On **Company** > **Company Profile** > **Setting** > **Leave Setting** there have 3 **Leave Calculation Method** to choose.

Leave Calculation Method :

Leave Cutoff Day :

- Days Method
- Month/Inclusive
- Month/Proportion

SOLUTION

Here is the formula for 3 Leave Calculation Method.

- For **Days Method**, the system will calculate the leave entitlement based on days

Calculation Formula:

n = No. of days start from year until Join/Confirm Month and Day


L1 = Leave Entitle Days before Join/Confirm Day.

L2 = Leave Entitle Days on and after Join/Confirm Day.

yearTotalDays = 365 or 366(if it's leap year)

Leave Entitlement = $\frac{((n - 1) \div \text{yearTotalDays}) \times L1}{1} + \frac{((\text{yearTotalDays} - n + 1) \div \text{yearTotalDays}) \times L2}{1}$

Join Date	Year of Service	No. of Days (n)	Total Days of Year (yearTotalDays)	Leave Entitle Days	Leave Entitlement
13/03/2019	01/01/2020 – 13/03/2020 (< 2 years)	73	366(leap year)	8 (L1)	$\frac{(((73-1) \div 366) \times 8)}{1} + \frac{(((366-73+1) \div 366) \times 8)}{1}$ = (1.62 + 6.38) = 8 days
	14/03/2020 – 31/12/2020 (< 2 years)	(31(Jan) + 29(Feb) + 13(Mar))		8 (L2)	
20/05/2018	01/01/2020 – 20/05/2020 (< 2 years)	141	366(leap year)	8(L1)	$\frac{(((141-1) \div 366) \times 8)}{1} + \frac{(((366-141+1) \div 366) \times 12)}{1}$ = (3.06 + 7.41) = 10.47 days
	21/05/2020 – 31/12/2020 (> 2 years and < 5 years)	(31(Jan) + 29(Feb) + 31(Mar) + 30(April) + 20(May))		12(L2)	

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- 2) For **Month/Inclusive**, to calculate leave of entitlement based on which cut of date of the month. (e.g.: if the cutoff date is set as 15 at Include the month in service length calculation if day of service is before or on, employees who join before 15 of the month, the system will include 1 day of leave entitlement and for those who join after 15 of the month, the system will exclude the 1 day of leave entitlement for that month.)

Calculation Formula:

CutoffDay = Leave Cutoff Day

Mons = No. of months start from year until Join/Confirm Month.

Or

Mons = Mons – 1 (If Join/Confirm Date <= CutoffDay)

L1 = Leave Entitle Days before Join/Confirm Day.

L2 = Leave Entitle Days on and after Join/Confirm Day.

Leave Entitlement = $((Mons \div 12) \times L1) + (((12 - Mons) \div 12) \times L2)$


Join Date	Year of Service	No. of Months (Mons)	Leave Entitle Days	Leave Entitlement
13/03/2019	01/01/2020 – 13/03/2020 (< 2 years)	2 (Jan + Feb + Mar)	8 (L1)	$((2 \div 12) \times 8) +$ $((12 - 2) \div 12) \times 8)$ $= (3.33 + 6.67) = 8 \text{ days}$
	14/03/2020 – 31/12/2020 (< 2 years)	(13(Join Date) <= Cutoff Day) (Mons = 3 – 1)	8 (L2)	
20/05/2018	01/01/2020 – 20/05/2020 (< 2 years)	5 (Jan + Feb + Mar + Apr + May)	8(L1)	$((5 \div 12) \times 8) +$ $((12 - 5) \div 12) \times 12)$ $= (3.33 + 7) = 10.33 \text{ days}$
	21/05/2020 – 31/12/2020 (> 2 years and < 5 years)	(20(Join Date) > Cutoff Day) (Mons = 5)	12(L2)	

Leave Cutoff Day: Specify the cutoff date for the system to calculate the leave entitlement. This setting is only applicable if Month/Inclusive method is used.

Leave Cutoff Day :

Include the month in service length calculation if day of service is before or on

For example: 15 is set on Leave Cutoff Day, therefore if date of service is before or on the 15th of the month, the system will include the month in service length calculation and if the date of service is after the 15th of the month, the system will exclude the month in the service length entitlement.

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3) For **Month/Proportion**, the system will calculate based on proportion

Calculation Formula:

Mons = No. of months before Join/Confirm Month

JoinDays = No. of days of Join/Confirm Day – 1

JoinMonthDays = No of days of Join/Confirm Month

Mon1 = Mons + (JoinDay ÷ JoinMonthDays)

Mon2 = 12 – Mon1

L1 = Leave Entitle Days before Join/Confirm Day.

L2 = Leave Entitle Days on and after Join/Confirm Day.

Leave Entitlement = $((Mon1 \div 12) \times L1) + ((Mon2 \div 12) \times L2)$

Join Date	Year of Service	No. of Months (Mon1 & Mon2)	Leave Entitle Days	Leave Entitlement
13/03/2019	01/01/2020 – 13/03/2020 (< 2 years)	Mon1 = 2 + ((13-1) ÷ 31) = 2.39	8 (L1)	$((2.39 \div 12) \times 8) +$ $((9.61 \div 12) \times 8)$ = 1.60 + 6.40 = 8 days
	14/03/2020 – 31/12/2020 (< 2 years)	Mon2 = 12 – 2.39 = 9.61	8 (L2)	
20/05/2018	01/01/2020 – 20/05/2020 (< 2 years)	Mon1 = 4 + ((20 – 1 ÷ 31) = 4.61	8(L1)	$((4.61 \div 12) \times 8) +$ $((7.39 \div 12) \times 12)$ = (3.07 + 7.39) = 10.46 days
	21/05/2020 – 31/12/2020 (> 2 years and < 5 years)	Mon2 = 12 – 4.61 = 7.39	12(L2)	