

## Schema & PCR Exercises

X000 -----> Z0XX (SCHEMA)

    COPY XT00 -----> COPY ZTXX (SUBSCHEMA)

        COPY XMOD -----> COPY ZMXX (PCR)

        DAYPR TC00 -----> DAYPR ZCXX(SUBSCHEMA)

            MOD TMOD -----> MOD ZTXX (PCR)

    COPY XAL9 -----> COPY ZAXX (SUBSCHEMA)

        PIT XPPF -----> PIT ZPXX (PCR)

Not part of the schema:

X018 -----> Z8XX (Calculation of Averages after Cumulations)

# Valuation of Wagetype

06/2013 ( 01.06.2013 - 30.06.2013 ) Regular payroll run in 06/2013

- Initialization of Payroll
  - Edit basic data
    - IF SPRM Special run?
    - ENDIF
  - Get previous result of period for V0
  - Import last payroll result
  - Processing of time data
    - GEMPS Generate Personal Work Schedule PWS
    - PARTT Partial period parameter
    - PRINT NP PART
    - IF X064 Carry Out Shift Change Compensation
    - ELSE Do not Perform Shift Change Compensation
    - ENDIF
    - PIT X010 P01 Create valuation bases (addition)
    - PIT X013 P01 Create valuation bases (division)
    - MOD ZM01 GEN Determine payroll modifiers
    - RAB Import absences
    - IF PDC Is PDC active in period?
    - ELSE PDC Not Active in Period
    - ENDIF
    - Shift Change Compensation
    - PAB Edit absence data
    - PRINT NP PART Print partial period parameter
    - P2010 X930 GEN NOAB Edit employee remuneration information
    - PALP X012 GEN Valuation Bases for Different Payments
    - PIT XALP NOAB Higher val. basis + extra pay + premium
    - ZLIT AMS Place summarized ZL entries in IT
    - PD416 Processing Quota Compensation
    - PIT X015 GEN Valuation of time wage types
    - AVERA Calculation of averages
    - PIT X009 GEN NOAB Remove val. bases with ALP split
    - Incentive wages
    - PIT X020 P03 Gross and RT storage for time wage types

## Valuation by Constants (T510J / T510): Example Weather Bonus

Only times or hours recorded (not amount): PDC/IT2010 /IT2005:

- MODIF 2 = 50 + XX (for all salaried type employee, use Group 50 + XX to value wage types by constant)
- T510J: Wage type 20XX ----- 5.00 Euros

Infotype 2010: Rule X930:

**Display calculation rule: X930**

X930 Remuneration Information Processing

- \*
  - \*\*\*\*
    - VALBS?0 ?Eval.WT in 512W?
      - \*
        - \*
          - X
            - GCY X935 With exact w.types

Is there a valuation basis in V\_512W\_B (V\_512W\_O)?

In this case yes, there is a 'K' (T510J)

## Rule X015: Valuation of time wage types

**Display calculation rule: X015**

X015 Valuation of time wage types

```

    *
    1
    2
    3
    ****
    AMT?0 Comparison
    *
    =
    NUM?0 Comparison
    *
    RTE?0 Comparison
    *
    VALBS? ?Eval.WT in 512W?
    *
    X
    GCY X115* [With exact w.types]
    =
    4
    9
  
```

**Display calculation rule: X115**

X115 Valuation of time wage types

```

    *
    ****
    WAKEYALZNR Different payment?
    N
    VWTCL 18 Processing class
    *
    VALBS0 Eval.0.WT in 512W
    ADDNA * Combine no. + amt.
    FILLF N Fill amt/no/rate
    WGTYP=* Set wage type
    VALBS1 Eval.1st WT in 512W
    ADDNA * Combine no. + amt.
    FILLF N Fill amt/no/rate
    WGTYP=* Set wage type
    VALBS2 Eval.2nd WT in 512W
    ADDNA * Combine no. + amt.
    1
    Y
  
```

**Display View "Valuation Bases": Details**

Wage Type 2001 Weather bonus

Periods

Start	E
01.01.1990	
> 01.01.1992	

Valuation Bases

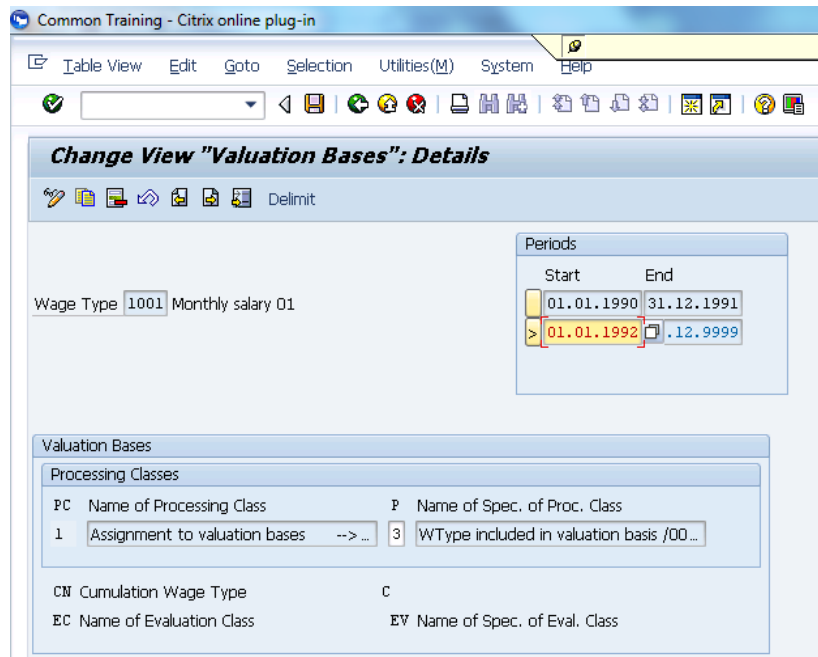
Current wage type	Valuation basis	StatemntWT	% Rate
	K		100.00
1st derived wage type	Valuation basis	StatemntWT	% Rate 0.00
2nd derived wage type	Valuation basis	StatemntWT	% Rate 0.00

## Person Related Valuation Bases: Example: Overtime

Does not use a table with fixed amount, it uses master data (e.g. IT0008) specific to the employee.

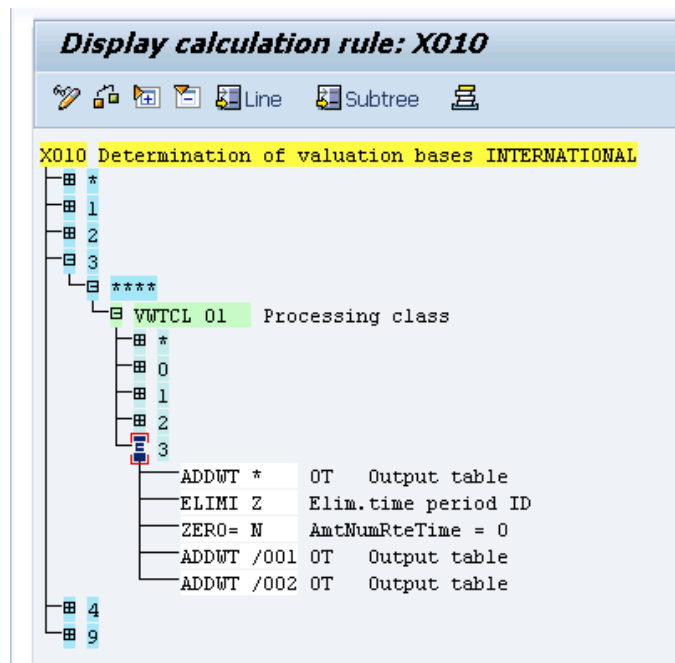
### Step 1: Calculate Hourly Rates

Copy of W/T M020 to 10XX



Processing class 1 set to 3 add to /001 & /002

### Rule X010:



**Rule: X013 Division**

/001(& /002) have 5 in Processing Class 1

**Complete view T512W: Detail**

Documentation

W. type  
/001 Valuation basis 1 Valid from: 01.01.1901 To : 31.12.9999

Valuation Bases				
Basis WT	Valuation basis	StatemntWT	% rate	0,00
1st der. WT	Valuation basis	StatemntWT	% rate	0,00
2nd der. WT	Valuation basis	StatemntWT	% rate	0,00

Processing classes / specifications																								
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
5	0	0	0	0	0				0										5					
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
			0	0	0														1					
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	

**Display calculation rule: X013**

X013 Division of valuation bases

- \*
  - 1
    - 2
      - 3
        - \*\*\*\*
          - VWTCL 01 Processing class
            - \*
              - 5
                - RTE=TSDIVP Set
                - DIVID ARR Division amt/no/rate
                - ZERO= A AmtNumRteTime = 0
                - ADDWT \* OT Output table
  - 4
  - 9

TSDIVP: T (T510H) SDIVP (working time per period from IT0008)

## Step 2: Assign Valuation Bases

**Change View "Valuation Bases": Details**

Wage Type 3001 Up to 2 hour overtime

Periods	
Start	End
01.01.1990	31.12.1991
01.01.1992	31.12.2001
> 01.01.2002	31.12.9999

Valuation Bases

Current wage type			
Valuation basis	01	StatemntWT	% Rate
			100.00

1st derived wage type			
Valuation basis	01	StatemntWT	% Rate
		3005	25.00

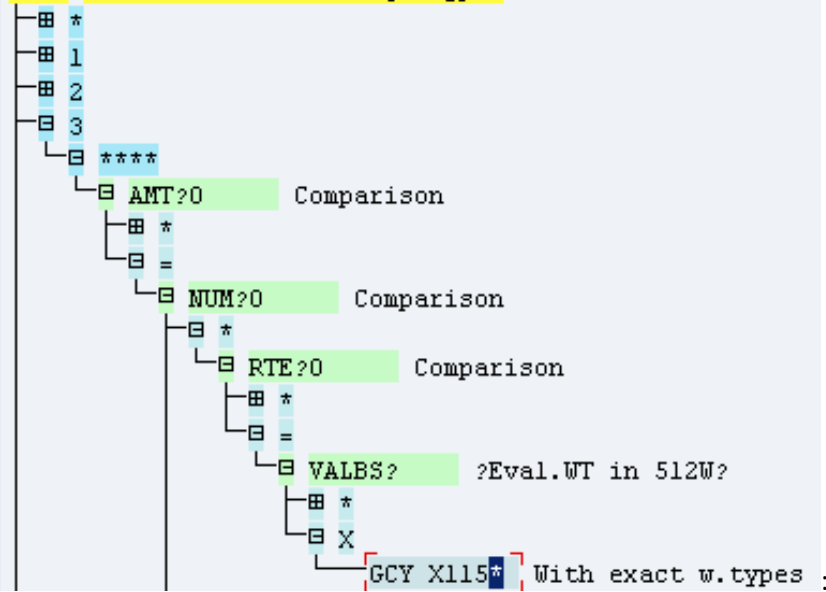
2nd derived wage type			
Valuation basis		StatemntWT	% Rate

Wagetype 3001 is valued using /001 and automatically creates w/t 3005 which is valued at 25% of /001.

The flow:

1. X010: Create /001 & /002 (add them up from IT0008)
2. X013: Divide /001 & /002 using hours per period
3. P2010: Process IT2010 (number of hour per wagetype)
4. X015: Value wage types (same as for constants)

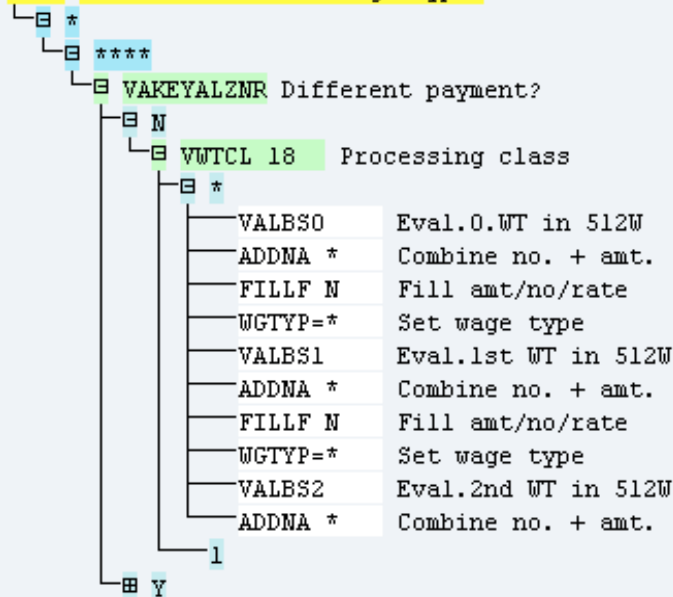
X015 Valuation of time wage types



**Display calculation rule: X115**



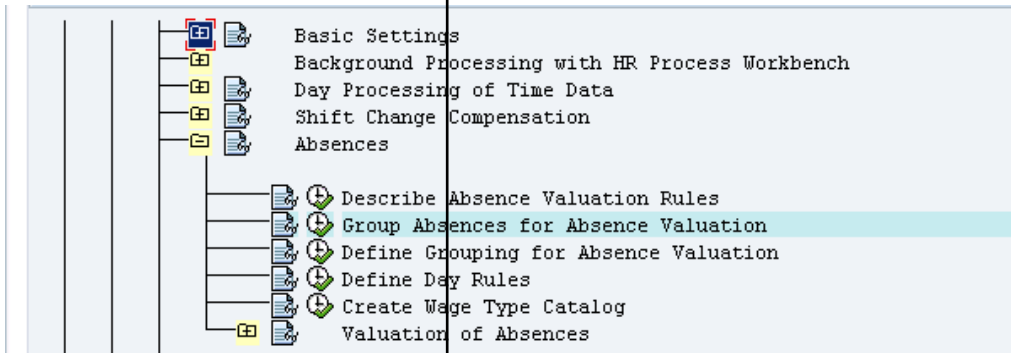
X115 Valuation of time wage types



## Valuation Absences

Set Grouping: XMOD Modif A = 60 + XX

Absence is linked to a Valuation Rule (T554S)



**Change View "Absence: Payment Data": Overview**

PSG	Att./abs. type	A/A type text	Start Date	End Date	Val.r	Cat.
01	0100	Leave w. quota d. (days)	01.01.1999	31.12.9999	01	01
01	0101	Leave w. quota d. (hours)	01.01.1990	31.12.9999	01	01
01	0102		01.01.1990	31.12.9999	01	01
01	0110	Leave 1/2 day	01.01.1999	31.12.9999	01	01

T554C: Rule is lined to grouping and to wage type

**Change View "Absence Valuation": Details**

AbsValGrpg: 61  
 Valuation rule: 01  
 Offcycle Indic.:  Regular valuation of an absence with...

Periods: Start: 01.01.2013, End: .12.9999

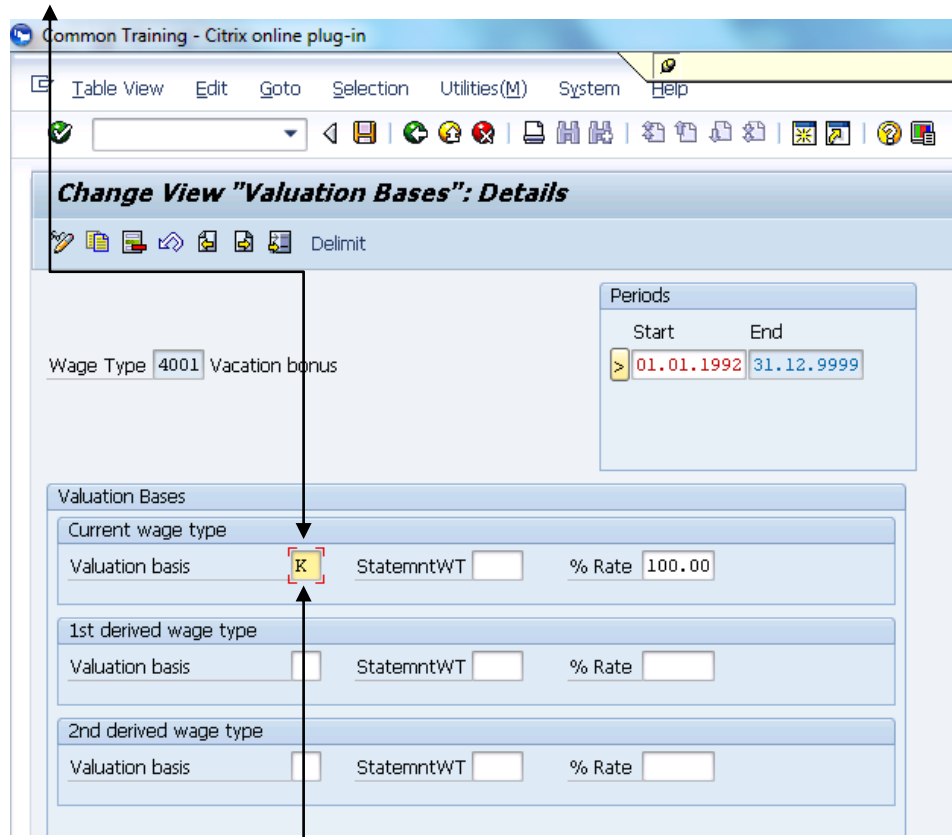
CC for absences	Cntg class text	Paid	Percentage	Day rule	Text for day
01	Leave	<input checked="" type="checkbox"/>	100.00		

Wage Type	Wage Type Long Text	Time	Percentage	Time unit	Short
4001	Vacation bonus	B	100.00	RT	Payroll



Example 20 euros per day bonus per day of holiday.

Wage type & its valuation: Wage type 400XX valuation basis (V\_512W\_B) = K (T510J)



T510J is accessed using modif 2 (50 + XX):

The screenshot shows the SAP 'Change View Constant Valuations: Overview' table. The table has columns for PMod., Wage T..., Wage Type Long Text, Start Date, End Date, Value, and Currency. The row for wage type 4001 is highlighted in yellow, showing a value of 20.00 EUR. A red box highlights the '51' in the PMod. column and the '4001' in the Wage T... column. An arrow points from the 'K' in the first screenshot to the '51' in this table, and another arrow points from the '20.00' in this table to the 'Value' column header.

PMod.	Wage T...	Wage Type Long Text	Start Date	End Date	Value	Currency
51	2001	Weather bonus	01.01.2013	31.12.9999	5.00	EUR
51	4001	Vacation bonus	01.01.2013	31.12.9999	20.00	EUR
81	2031	Weather bonus	01.01.2009	31.12.9999	5.00	EUR
81	4031	Vacation bonus	01.01.2009	31.12.9999	20.00	EUR

PAB & X015 process the absences and pay it.

## Day Rules

Common Training - Citrix online plug-in

Table View Edit Goto Selection Utilities(M) System Help

**Change View "Absence Valuation": Details**

New Entries Delimit

AbsValGrpg: 61  
Valuation rule: 01 Leave  
Offcycle Indic.:  Regular valuation of an absence with...

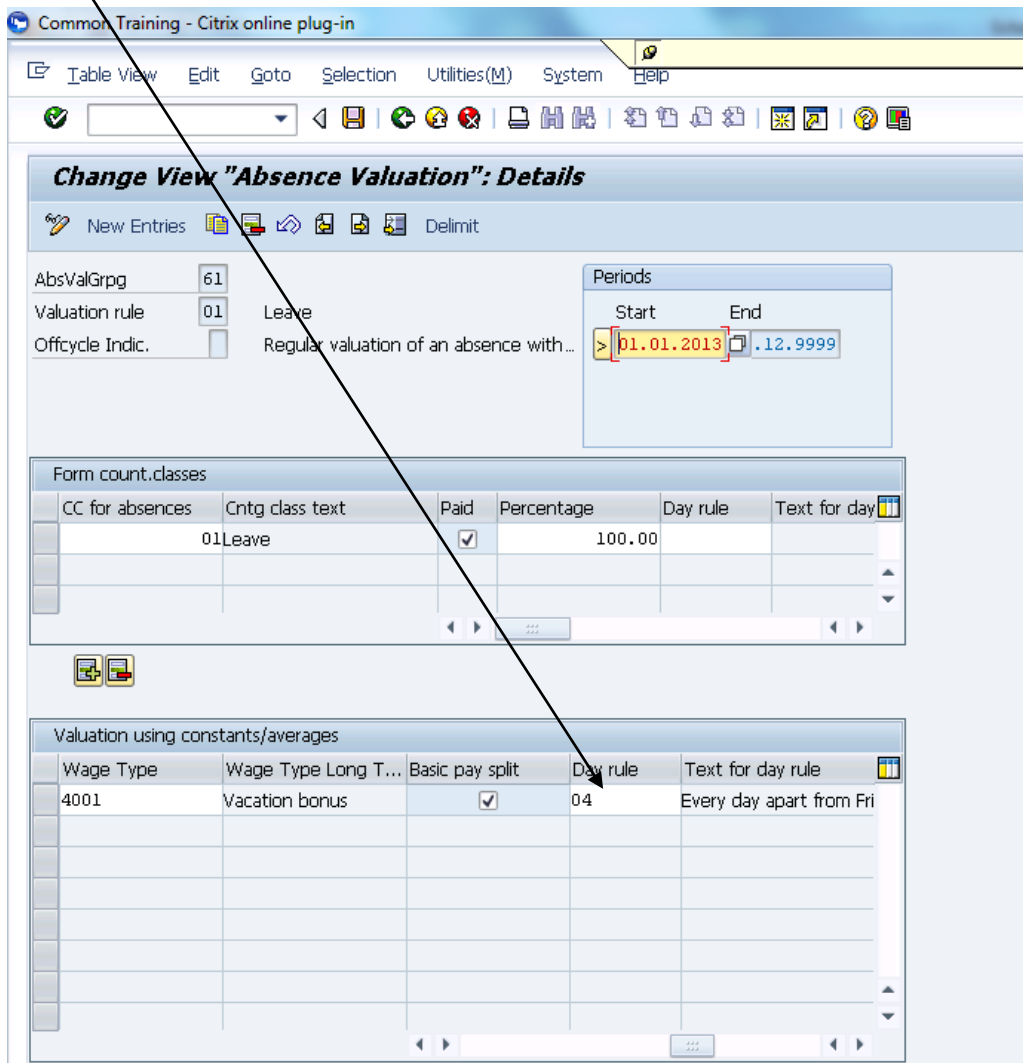
Periods  
Start: 01.01.2013  
End: .12.9999

Form count.classes

CC for absences	Cntg class text	Paid	Percentage	Day rule	Text for day
	01Leave	<input checked="" type="checkbox"/>	100.00		

Valuation using constants/averages

Wage Type	Wage Type Long T...	Basic pay split	Day rule	Text for day rule
4001	Vacation bonus	<input checked="" type="checkbox"/>	04	Every day apart from Fri



## Average Processing

### Create Average Calculation Bases /201 & /202

Common Training - Citrix online plug-in

Table View Edit Goto Selection Utilities(M) System Help

**New Entries: Overview of Added Entries**

Expand <-> Collapse New Entries Delimit

Wage Ty...	AVBasis	Start Date	End Date	Rate	Percent	Nu...	Percent	Am...	F
3001	/201	01.01.2013	31.12.9999					<input checked="" type="checkbox"/>	1
3002	/201	01.01.2013	31.12.9999					<input checked="" type="checkbox"/>	1
3003	/201	01.01.2013	31.12.9999					<input checked="" type="checkbox"/>	1
3004	/201	01.01.2013	31.12.9999					<input checked="" type="checkbox"/>	1
3005	/202	01.01.2013	31.12.9999					<input checked="" type="checkbox"/>	1
3006	/202	01.01.2013	31.12.9999					<input checked="" type="checkbox"/>	1
3007	/202	01.01.2013	31.12.9999					<input checked="" type="checkbox"/>	1
3008	/202	01.01.2013	31.12.9999					<input checked="" type="checkbox"/>	1

Make sure Wage type 4001 has no valuation basis

**Change View "Valuation Bases": Details**

Delimit

Wage Type  Vacation bonus

Periods

Start	End
01.01.1992	30.04.2013
> 01.05.2013	31.12.9999

Valuation Bases

Current wage type

Valuation basis  StatemntWT  % Rate

1st derived wage type

Valuation basis  StatemntWT  % Rate

2nd derived wage type

Valuation basis  StatemntWT  % Rate

### Create Cumulation Rules

**Change View "Cumulation Rules for Bases for Calculating Average Values**

Expand <-> Collapse New Entries Delimit

Cum. rule	Cumulation text	AV base	AMT	+	Adj.rule	Factoring
XINW	Cumulation rule incentive wages	/2IW	<input checked="" type="checkbox"/>	+		
ZC01	Cumulation for Daily OT 31	/201	<input checked="" type="checkbox"/>	+		
ZC01	Cumulation for Daily OT 31	/202	<input checked="" type="checkbox"/>	+		

ZC01 adds up the contents of /201 & /202

Create Average Formula (Average is formed by total of /201 & /202 from the previous 3 periods and divided by 22 (working days) x 3)

**Display calculation rule: Z801**

NUM=GADIVP Set  
 NUM\*3.00 Multiplication  
 AMT=M Set  
 DIVID ANR Division amt/no/rate

Calculation of average after cumulation: AMT / NUM

NUM= G ADIVP (T510H) = 22 (DAYS PER MONTH)

22 x 3 = 66 Working days in the previous periods

AMT = Total in Average Table (/201 & /202)

Divide Total in average table by 66 and put in rate field.

Create Final Processing Rule (PCR from previous step)

**Change View "Final Processing Rules for Averages": Overview**

Final proc	FPr	Short description
XINW	XW02	Calculate previous month's average
ZE01	Z801	Calculation of average after cumulation: AMT / NUM
ZE31	Z831	Calculation of average after cumulation: AMT / NUM

Create Calculation Rules (Cumulation Rule and Final Processing Rule from previous step)

**Change View "Calculation Rules for Averages": Overview**

AV rule	Av. rule text	Start Date	End Date	rel.rule	Cum. rule	Fin.proc.	Comp.rule	Relev.A\
XINW	Calculation rule incentive	01.01.1990	31.12.9999	XINW	XINW	XINW		2
ZA01	HR400 Daily OT Calc 01	01.01.2013	31.12.9999	ZC01	ZC01	ZE01		3

Add-up /201 & /202 then divide by 66

Assign Wage Type to the calculation rule.

**Change View "Assignment of Wage Types to Average Calculation Rules"**

Expand <-> Collapse    New Entries    Delimit

Wage Ty...	Wage Type Long Text	Start Date	End Date	Av. rule	Av. rule te
/0IW	Average incentive wages	01.01.1990	31.12.9999	XINW	Calculation
4001	Vacation bonus	01.05.2011	31.12.9999	ZA01	HR400 Daily
4031	Vacation bonus	01.05.2011	31.12.9999	ZA31	HR400 Daily

### Run Payroll

Processing

Prepare date specifications

Customizing  
Wage types that should be valuated using averages

WType	WTypeText	Valid from	Valid to
4001	Vacation bonus	01.05.2011	31.12.9999
ZA01	HR400 Daily OT Calc 01		

Average calculation rules used

AV Rule	Valid from	Valid to	Rel. Rule	Cum. Rule	Fin.Proc.	Comp.Rule	Relev.Per	Time Unit	Max.Per	Also Curr.
ZA01	01.01.2013	31.12.9999		ZC01	ZE01		003	01	000	

Cumulation rules for bases for calculating average values

Cum. Rule	Av Base	Valid	RATE +/-	Mod. Rule	NUM +/-	Mod. Rule	AMT +/-	Mod. Rule	Factoring
ZC01	/201	01.01.2009	31.12.9999				X +		
ZC01	/202	01.01.2009	31.12.9999				X +		

Table IT

A Wage Type	APC1C2C3aBKoReBTawvTvN0ne	Amount/One Number	Amount
3 /001 Valuation b01		16.62	
3 /002 Valuation b01		14.70	
3 1001 Monthly sal01			2,300.00
3 4001 Vacation bo01	01 010	8.06 3.00	24.18
3 5001 Bonus	01		300.00

# Factoring

From 'Processing of Time Data' block:

## GENPS

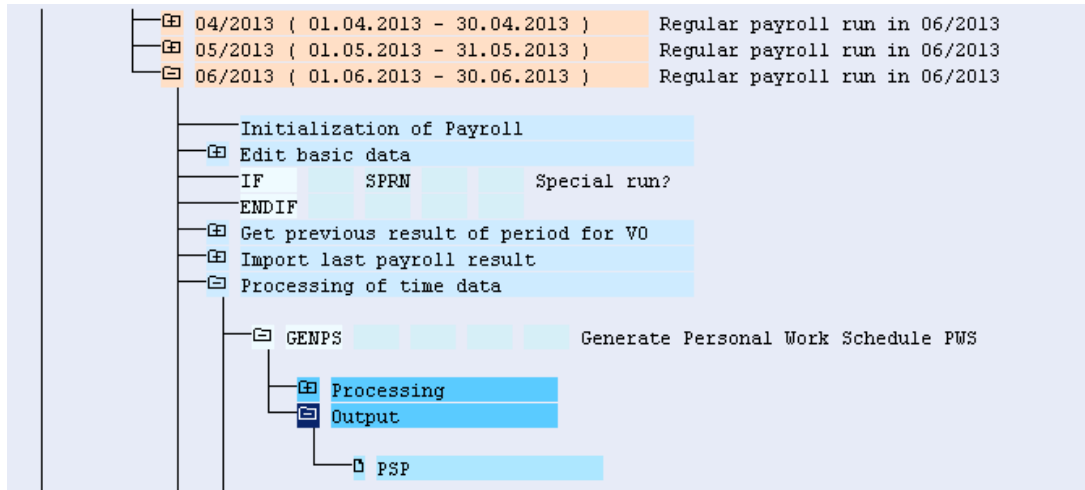
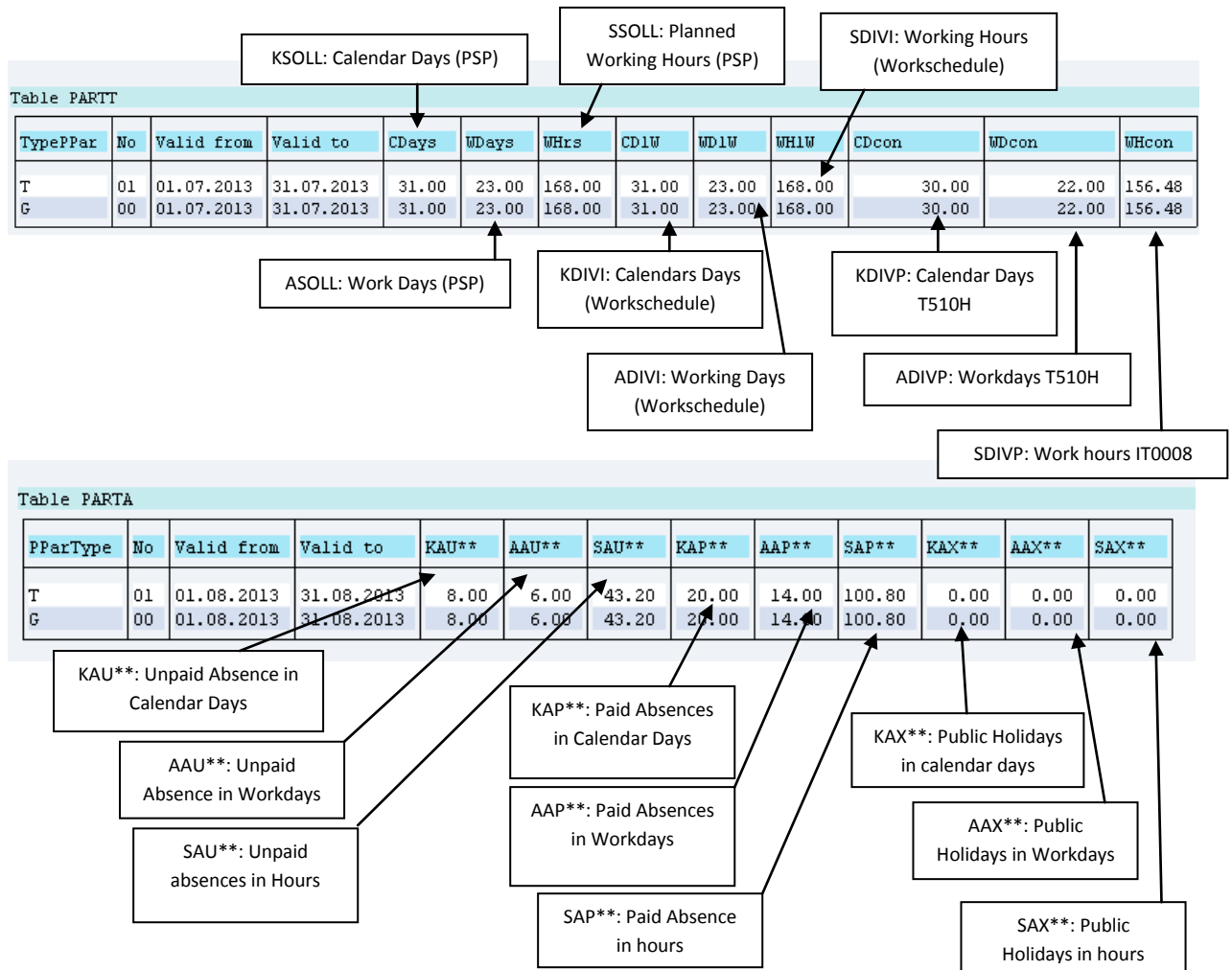


Table PSP

Date	Grpg DWS	Daily WS	Day type	PublHolCal	Variant	DWS class	PeriodDWS	Hours	Act	Nat01	Nat02	Break plan
31.05.2013	01	FLEX	0	0	B	5	FLEX	4.00	X			FLEX
01.06.2013	01	OFF	0	0		0	FLEX	0.00	X			
02.06.2013	01	OFF	0	0		0	FLEX	0.00	X			
03.06.2013	01	FLEX	0	0	A	1	FLEX	7.20	X			FLEX
04.06.2013	01	FLEX	0	0	A	1	FLEX	7.20	X			FLEX
05.06.2013	01	FLEX	0	0	A	1	FLEX	7.20	X			FLEX
06.06.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX
07.06.2013	01	FLEX	0	0	B	5	FLEX	4.00	X			FLEX
08.06.2013	01	OFF	0	0		0	FLEX	0.00	X			
09.06.2013	01	OFF	0	0		0	FLEX	0.00	X			
10.06.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX
11.06.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX
12.06.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX
13.06.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX
14.06.2013	01	FLEX	0	0	B	5	FLEX	4.00	X			FLEX
15.06.2013	01	OFF	0	0		0	FLEX	0.00	X			
16.06.2013	01	OFF	0	0		0	FLEX	0.00	X			
17.06.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX
18.06.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX
19.06.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX
20.06.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX
21.06.2013	01	FLEX	0	0	B	5	FLEX	4.00	X			FLEX
22.06.2013	01	OFF	0	0		0	FLEX	0.00	X			
23.06.2013	01	OFF	0	0		0	FLEX	0.00	X			
24.06.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX
25.06.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX
26.06.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX
27.06.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX
28.06.2013	01	FLEX	0	0	B	5	FLEX	4.00	X			FLEX
29.06.2013	01	OFF	0	0		0	FLEX	0.00	X			
30.06.2013	01	OFF	0	0		0	FLEX	0.00	X			
01.07.2013	01	FLEX	0	0		1	FLEX	8.00	X			FLEX

**PARTT**

**Insert PRINT NP PART**



**From 'Factoring & Storage' block:**

Determine Reduction Factors (what gets pro-rated due to absence inactivity, change in pay, working time, etc...)

- GEN/8 16 (generate 16 /8XXwagetypes) and multiply by 100000 (GENAU - T511K)

**Rule XPPF:** PPAR R: Provide Partial Period Parameters

**Display calculation rule: XPPF**

XPPF Determine partial period factors

- \*
  - /801 Partial period factor 1
    - PPPAR R WCenter inactive/PP?
      - \*
        - GCY XPP0 With exact w.types
        - R
    - /802 Partial period factor 2
      - PPPAR R WCenter inactive/PP?
        - \*
          - GCY XPP0 With exact w.types
          - R
            - ADDWT \* OT Output table
    - /810 Partial period factor 10
      - RTE=TSDIVI Set
      - RTE-TSDIVP Subtraction
      - RTE\*KGENAU Multiplication
      - RTE/TSDIVP Division
      - ADDWT \* OT Output table
    - /814 Partial period factor 14
    - /815 Partial period factor 15
    - /816 Partial period factor 16

R For inactive work relationship during the entire partial period (the employment status is either inactive or left in the entire partial period.

N EE leaves in the following payroll period.

F EE leave on the first day of the following payroll period.

C The operation places a C in the variable key if one of the following cases occurs:

- EE starts on the first day of the current partial period
- Change in legal period on the first day of the current payroll period according to table T549Q

D Change in employment status in the infotype Basic Pay (0008) on the first day of the payroll period.

G Change in employment status in the infotype Basic Pay (0008) within the payroll period.

H Change in weekly working hours in infotype Planned working time (0007) on the first day of the payroll period.

I Change in weekly working hours in the infotype Planned working time (0007) within the payroll period.

J Change in legal person on the first day of the following payroll period.

L Change in legal person within the current payroll period.

M Change in employee group or EE subgroup within the partial period.

P If the time unit of the payroll area is not the same as the

Example: Process Wagetype /801

XPPF: Was the person a leaver or inactive for the entire period? If not goto PCR XPP0:

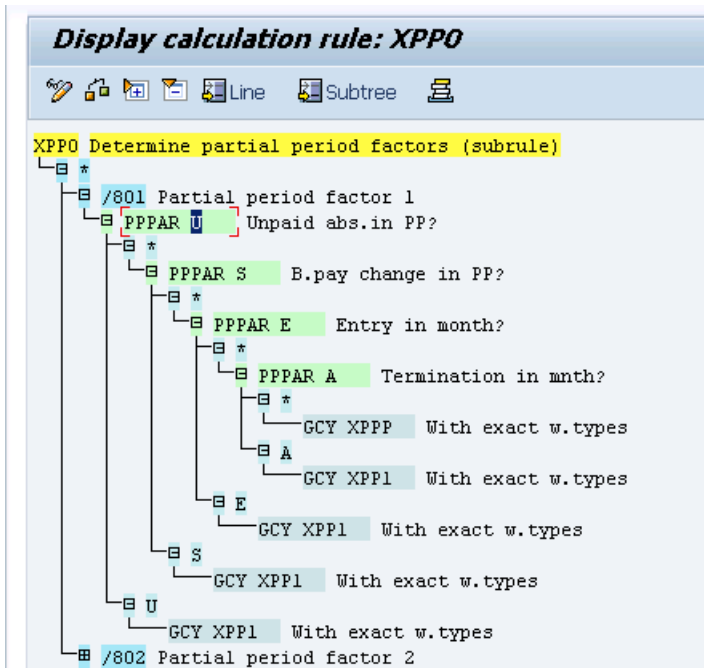
**Display calculation rule: XPPF**

XPPF Determine partial period factors

- \*
  - /801 Partial period factor 1
    - PPPAR R WCenter inactive/PP?
      - \*
        - GCY XPP0 With exact w.types
        - R



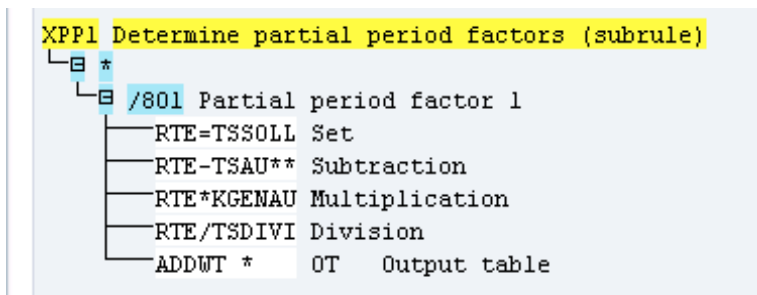
**XPP0:** Were there any unpaid absences during the period? If yes then place a 'U' in the variable key and go to PCR XPP1 if no then:



PPPAR S: Was there a change in basic pay? If yes put an S in the variable key if not then:

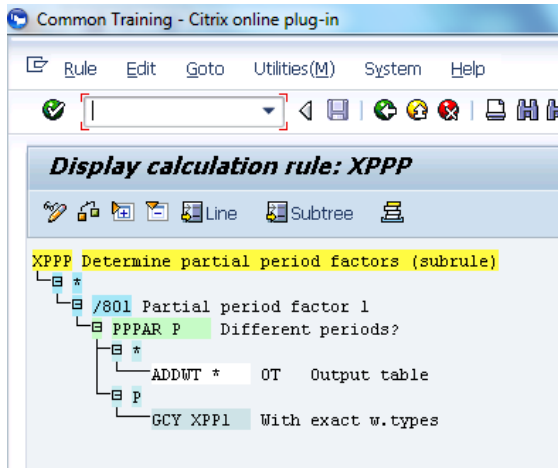
PPPAR E: Did they start work during this period? If yes then put an E in the variable field if not then:

PPPAR A: Did they leave during the month? If yes then call PCR XPP1:



Rate = (Planned Working Time Hours (PSP) - Unpaid absences in hours) x 10000 / Working Hours (Workschedule)

If they did not leave in the month then go to PCR XPPP:



PPPAR P: Does the pay period for the payscale differ from that of the payroll? If yes then go to PCR XPP1 (as above) if not then place in output table.

A	Wage Type	APC1C2C3aBKoReBTawTvW0ne	Amount/One	Number	Amount
3	/001 Valuation b01				17.25
3	/002 Valuation b01				14.70
3	/801 Partial per01				72,307.69
3	/802 Partial per01				9,090.91
3	/804 Partial per01				100000.00
3	/805 Partial per01				100000.00
3	/806 Partial per01				100000.00
3	/807 Partial per01				100000.00
3	/808 Partial per01				100000.00
3	/809 Partial per01				100000.00
3	/810 Partial per01				306.75-
3	/811 Partial per01				100000.00
3	/812 Partial per01				100000.00
3	/813 Partial per01				100000.00
3	/815 Partial per01				64,615.38
3	/816 Partial per01				27,692.31
3	1088 Monthly sal01				2,300.00
3	4030 Vacation bo01	01	010	4.01	14.00
3	5000 Bonus				300.00
3	6029 Trainer bon01				100.00

Our example in the exercise:

Processing Class 10: Assign Wagetype to reduction factor e.g. /803 as below (V\_512W\_D):

Wage Type  Trainer bonus

Start  End

Indicator for monthly factoring

Processing Classes

PC	Name of Processing Class	P	Name of Spec. of Proc. Class
10	Mark wage types for monthly factorin...	3	Reduction with factor /803

The example is that the 'trainer bonus' is paid if the person worked on at least 5 planned working days., if not then they receive nothing.

## Maintain calculation rule: ZP88

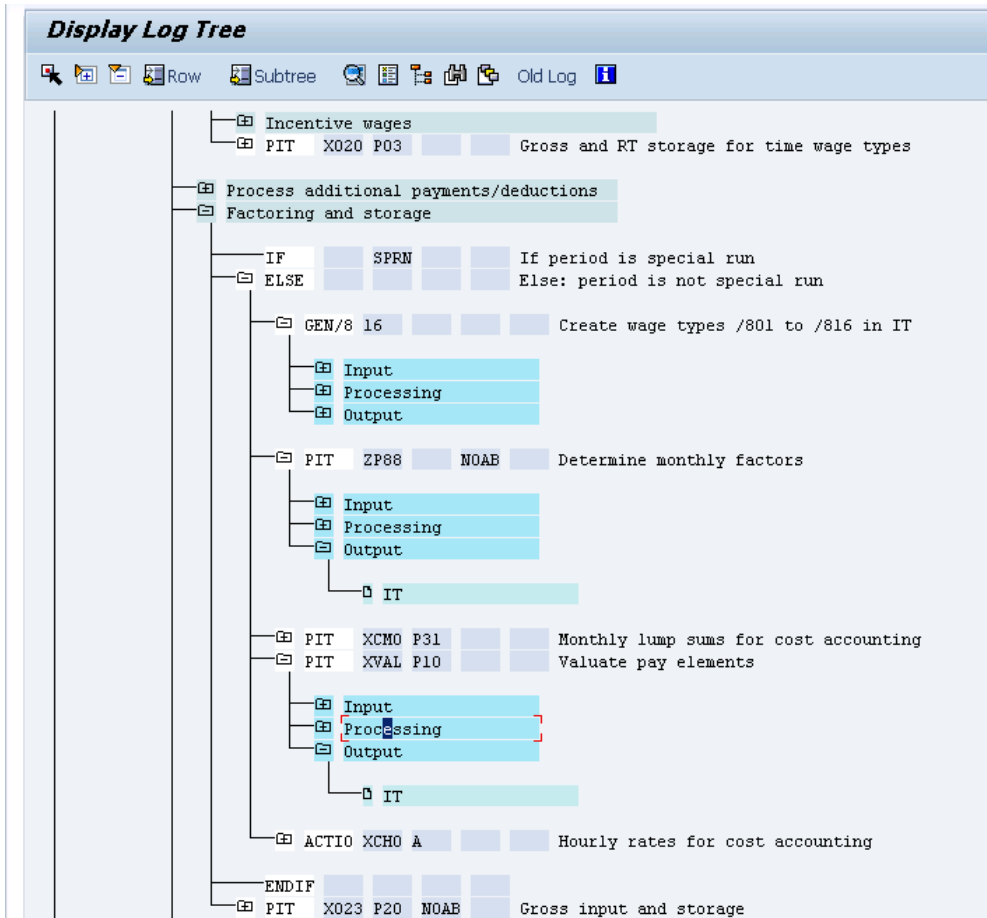
The screenshot shows the SAP calculation rule ZP88, titled "Determine partial period factors". The rule structure is as follows:

- \*
  - /801 Partial period factor 1
  - /802 Partial period factor 2
  - /803 Partial period factor 3
    - RTE=GASOLL Set
    - RTE-GAAU\*\* Subtraction
    - RTE-GAAP\*\* Subtraction
    - RTE?5 Comparison
      - <
        - RTE=0 Set
        - ADDWT \* OT Output
      - \*
        - RTE=1 Set
        - RTE\*KGGENAU Multiplication
        - ADDWT \* OT Output

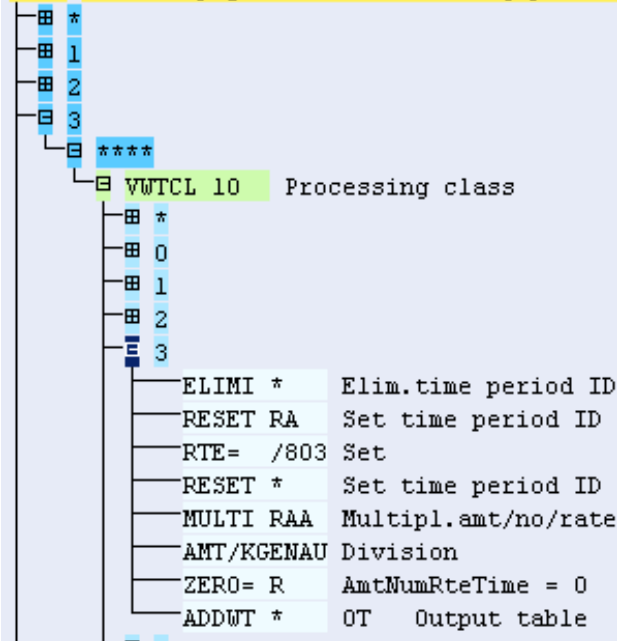
The tooltip provides the following definitions and calculations:

- Rate=GASOLL: Working Days (PSP) e.g., 23 Days
- GAAU\*\*: Unpaid absences in workdays e.g. 9 Days
- 23-9=14
- GAAP\*\*: Paid absence in workdays e.g. 9 Days
- 14-9=5
- Rate?5 ---> \*
- RTE=1
- 1 \* 10000 (KGENAU from T511K)

## XVAL: Valuating Remuneration Elements



### XVAL Valuate payroll elements using partial period factors



EESG 3 (Salaried)

Check processing class 10 of the wage type being processed:

Eliminate period/split indicators from IT/OT & RT

Reset period split indicators caused by EESG (R) and WPBP (A)

Rate = /803

Reset all split indicators

Multiply Rate (/801) by Amount (salary)

Divide by 10000

Zero the rate field