Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses
State of Oregon Department of Consumer and Business Services

How to calculate Average Employment for an establishment:

1) Determine the number of employees paid on each pay period during the year.
2) Total the number of employees for each pay period to get the total number of employees for the year.
3) Divide the total number of employees for the year by the number of pay periods.

Formula to Calculate Average Employment

$$\text{Average Employment} = \frac{\text{Total Employees Paid For Year}}{\text{Number of Pay Periods}}$$

Example: The tables below list the number of employees for each pay period. The Total Sum for each table is the total number of employees for the year.

1 Pay Period

(Period)	Employees
(1)	312
Total Sum	**312**

12 Pay Periods

(Period)	Employees
(1)	350
(2)	379
(3)	220
(4)	260
(5)	400
(6)	115
(7)	361
(8)	400
(9)	550
(10)	109
(11)	400
(12)	200
Total Sum	**3,744**

26 Pay Periods

(Period)	Employees	(Period)	Employees
(1)	300	(14)	227
(2)	400	(15)	230
(3)	210	(16)	294
(4)	200	(17)	474
(5)	300	(18)	170
(6)	160	(19)	215
(7)	261	(20)	465
(8)	160	(21)	372
(9)	600	(22)	425
(10)	118	(23)	319
(11)	300	(24)	417
(12)	150	(25)	516
(13)	400	(26)	429
Total Sum			**8,112**

52 Pay Periods

(Period)	Employees	(Period)	Employees	(Period)	Employees	(Period)	Employees
(1)	400	(14)	179	(27)	205	(40)	200
(2)	360	(15)	180	(28)	220	(41)	370
(3)	370	(16)	175	(29)	274	(42)	395
(4)	350	(17)	210	(30)	325	(43)	440
(5)	206	(18)	170	(31)	247	(44)	367
(6)	392	(19)	219	(32)	234	(45)	392
(7)	404	(20)	315	(33)	360	(46)	247
(8)	360	(21)	330	(34)	270	(47)	345
(9)	340	(22)	236	(35)	327	(48)	595
(10)	234	(23)	200	(36)	292	(49)	607
(11)	297	(24)	327	(37)	277	(50)	566
(12)	210	(25)	204	(38)	375	(51)	425
(13)	250	(26)	135	(39)	299	(52)	517
Total Sum							**16,224**

The table below explains how to calculate **Average Employment** using the number of pay periods and the total sum of all employees from the tables above.

Number of Pay Periods	Total Employees Paid for the Year	Calculation	Math Equation	Result = Average Employment
1	312	312 divided by 1	312 / 1	312
12	3,744	3,744 divided by 12	3,744 / 12	312
26	8,112	8,112 divided by 26	8,112 / 26	312
52	16,224	16,224 divided by 52	16,224 / 52	312

Note: As shown in the examples, average employment is always calculated using the 3 steps in the instructions above, regardless of the number of pay periods.

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How to calculate (or estimate) Total Hours Worked for an Establishment:

• Total Hours Worked refers to the total number of productive hours worked by all employees for the survey year. It is NOT an average per employee.
• Total Hours Worked should include ONLY productive hours. Vacation leave, sick leave, or sabbatical should NOT be included.
• Total Hours Worked should include overtime or anytime the employees worked outside of regular hours including holidays.

Example 1: This establishment has 20 full-time employees who work 40 hours per week for 50 weeks per year.

Number of Employees	Hours Per Week	Number of Work Weeks	Calculation	Math	Total Hours Worked
20	40	50	20 empl x 40 hrs per week x 50 weeks	20 x 40 x 50	40,000 hours

Result: This establishment had 40,000 Total Hours Worked for the survey year sampled.

Example 2: This establishment has 20 full-time employees who work 40 hours per week and 10 part-time employees who work 20 hours per week. All employees work 50 weeks per year.

Number of Employees	Hours Per Week	Number of Work Weeks	Calculation	Math	Total Hours Worked
20	40	50	20 empl x 40 hrs per week x 50 weeks	20 x 40 x 50	40,000 full-time hours
10	20	50	10 empl x 20 hrs per week x 50 weeks	10 x 20 x 50	10,000 part-time hours
Total Hours Worked By All Employees					50,000 total hours

Result: This establishment had 50,000 Total Hours Worked for the survey year sampled.

Possible sources of employee hours for calculating Total Hours Worked:

1) Payroll: Payroll records often provide exact figures for the Total Hours Worked for all employees. Round to the nearest whole number.

2) Employee Schedules: Many establishments have regular employee schedules from week to week. Estimate the number of hours each employee works on an average week. Multiply the number of hours worked by each employee by the number of employees, then multiply the result by the number of work weeks.

3) Weekly Schedules: Some establishments have employees working inconsistent hours each week, but the weekly hours for all employees stays the same. For example, restaurant and retail employees often work a different schedule weekly, but the total number of weekly hours for all employees stays the same. In this case, multiply the total number of weekly hours for all employees by the total number of work weeks.

Note: Please contact the Oregon BLS Survey Hotline at 503-947-7030 if you need assistance with any of these calculations.