

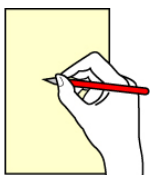


Working out pay and overtime calculations

Try it out

This part of the task gives you the chance to try out your skills and check your progress with some test-type questions from the Progress Checks at Level 2.

It also contains the answers to all the activities in Part 1 and Part 3.



Now try out your skills by doing the following two tasks.

- 1 On the wage slip below, work out the sections highlighted.
 - a) Work out the total deductions (on the left side of the wage slip).
 - b) Fill in the gross pay by working out the 'basic pay' and 'overtime pay'. The rate of pay for overtime is 'time and a quarter'. You will need to work out the hourly rate for this.
 - c) Work out the net pay (on the right side of the wage slip). This will be the pay Paul receives after the deductions have been taken off.

Name: Paul Anderson		Week ending: 5 July				
Works/dept. no: 3229		Tax code: 530L				
Gross pay to date: £3,168.00		Tax week: 12				
Tax deducted to date: £441.33						
Deductions:	£	p	Pay:	£		p
Income tax	52	. 80	Basic pay Hours: 30 at £6.40		.	
National Insurance	21	. 12	Overtime Hours: 7½ at		.	
Other	1	. 08	Gross pay		.	
Total deductions		.	Deductions		.	
			Net pay		.	



Build your skills: Pay calculations – Part 3

- 2 On the timesheet below, work out the highlighted sections.
- Work out the monthly total times (column 6) worked in each row. This will be the total of the hours from week 1 to week 4.
 - Fill in the rates of pay for the weekend hours (column 7, row 3) and bank holiday hours (column 7, row 4). The rate of pay for weekends is 'time and a quarter'. The rate of pay for bank holidays is 'time and a half'.
 - Work out the total pay for each row (column 8).
 - Work out the total gross pay you would expect after working the hours shown on the wage slip, and write it in the bottom right cell of the table.

Month: 9	Wk 1	Wk 2	Wk 3	Wk 4	Monthly totals	Rate	Total pay
Weekdays	20	20	30	20		£5.60	
Weekends	7½	15	5	10			
Bank holidays	7½	–	–	6¾			
Total:							



Build your skills: Pay calculations – Part 3

Questions to check on your progress

These questions are taken from the progress checks – confidence-building tests on the Move On Learner Route at www.move-on.org.uk.

(Taken from Progress Check E, Q11)

An electrician earns a basic rate of £11.20 per hour for a 35-hour week. For each hour worked over 35 hours, he earns $1\frac{1}{4}$ times the basic rate. One week he works for 40 hours.

How much does he earn?

- A. £392
- B. £448
- C. £462
- D. £560

(Taken from Progress Check B, Q23)

A metal cylinder weighs 4 kilograms. When filled with gas it weighs 5 kilograms.

What is the weight of the gas as a fraction of the weight of the cylinder full of gas?

- A. $\frac{1}{9}$
- B. $\frac{1}{5}$
- C. $\frac{1}{4}$
- D. $\frac{4}{5}$



Build your skills: Pay calculations – Part 3

(Taken from Progress Check C, Q11)

The table shows the number of hours worked by employees of a company in one week.

Part-time employees work 30 hours or less. What fraction of the 120 employees is part-time?

Hours Worked (nearest hour)	Number of employees
1-10	11
11-20	6
21-30	23
31-40	72
41-50	8

- A. $\frac{17}{120}$
- B. $\frac{1}{4}$
- C. $\frac{1}{3}$
- D. $\frac{1}{2}$

(Adapted from Progress Check E, Q11.)

An electrician earns a basic rate of £7.20 per hour for a 35-hour week. For each hour worked over 30 hours, he earns $1\frac{1}{2}$ times the basic rate.

One week he works for 40 hours. How much does he earn?

- A £288
- B £432
- C £324
- D £252



Build your skills: Pay calculations – Part 3



Answers to questions in Part 1

Activity 1

Number of minutes	Fraction of an hour
15 minutes	$\frac{1}{4}$
10 minutes	$\frac{1}{6}$
30 minutes	$\frac{1}{2}$

Number of minutes	Fraction of an hour
12 minutes	$\frac{1}{5}$
20 minutes	$\frac{1}{3}$
5 minutes	$\frac{1}{12}$

Activity 2

Fraction	Factor	Equivalent fraction
$\frac{10}{60}$	10	$\frac{1}{6}$
$\frac{30}{60}$	30	$\frac{1}{2}$
$\frac{15}{60}$	15	$\frac{1}{4}$
$\frac{12}{60}$	12	$\frac{1}{5}$
$\frac{5}{60}$	5	$\frac{1}{12}$
$\frac{20}{60}$	20	$\frac{1}{3}$
$\frac{45}{60}$	15	$\frac{3}{4}$
$\frac{40}{60}$	20	$\frac{2}{3}$



Build your skills: Pay calculations – Part 3

Activity 3

Minutes	Hours
150 minutes	$2\frac{1}{2}$ hours
240 minutes	4 hours
90 minutes	$1\frac{1}{2}$ hours
135 minutes	$2\frac{1}{4}$ hours
165 minutes	$2\frac{3}{4}$ hours

Minutes	Hours
105 minutes	$1\frac{3}{4}$ hours
195 minutes	$3\frac{1}{4}$ hours
270 minutes	$4\frac{1}{2}$ hours
300 minutes	5 hours
210 minutes	$3\frac{1}{2}$ hours

Activity 4

- 1 $2\frac{1}{2}$ hours at an hourly rate of pay of £5.60

$$\begin{array}{l} 2 \text{ hours} \quad \text{at} \quad \text{£}5.60 = \text{£}11.20 \\ \frac{1}{2} \text{ an hour} \quad \text{at} \quad \text{£}5.60 = \underline{\text{£} 2.80} + \\ 2\frac{1}{2} \text{ hours} \quad \text{at} \quad \text{£}5.60 = \text{£}14.00 \end{array}$$

- 2 $3\frac{1}{4}$ hours at an hourly rate of pay of £6.40

$$\begin{array}{l} 3 \text{ hours} \quad \text{at} \quad \text{£}6.40 = \text{£}19.20 \\ \frac{1}{4} \text{ of an hour} \quad \text{at} \quad \text{£}6.40 = \underline{\text{£} 1.60} + \\ 3\frac{1}{4} \text{ hours} \quad \text{at} \quad \text{£}6.40 = \text{£}20.80 \end{array}$$

- 3 $5\frac{1}{2}$ hours at an hourly rate of pay of £7.20

$$\begin{array}{l} 5 \text{ hours} \quad \text{at} \quad \text{£}7.20 = \text{£}36.00 \\ \frac{1}{2} \text{ an hour} \quad \text{at} \quad \text{£}7.20 = \underline{\text{£} 3.60} + \\ 5\frac{1}{2} \text{ hours} \quad \text{at} \quad \text{£}7.20 = \text{£}39.60 \end{array}$$

- 4 $4\frac{3}{4}$ hours at an hourly rate of pay of £6.40

$$\begin{array}{l} 4 \text{ hours} \quad \text{at} \quad \text{£}6.40 = \text{£}25.60 \\ \frac{3}{4} \text{ of an hour} \quad \text{at} \quad \text{£}6.40 = \underline{\text{£} 4.80} + \\ 4\frac{3}{4} \text{ hours} \quad \text{at} \quad \text{£}6.40 = \text{£}30.40 \end{array}$$

- 5 $7\frac{1}{4}$ hours at an hourly rate of pay of £5.60

$$\begin{array}{l} 7 \text{ hours} \quad \text{at} \quad \text{£}5.60 = \text{£}39.20 \\ \frac{1}{4} \text{ of an hour} \quad \text{at} \quad \text{£}5.60 = \underline{\text{£} 1.40} + \\ 7\frac{1}{4} \text{ hours} \quad \text{at} \quad \text{£}5.60 = \text{£}40.60 \end{array}$$



Build your skills: Pay calculations – Part 3

Activity 5

Fraction	Decimal
$\frac{1}{2}$	0.5
$\frac{3}{4}$	0.75
$\frac{1}{4}$	0.25

Fraction	Decimal
$\frac{1}{5}$	0.2
$\frac{1}{10}$	0.1

Activity 6

- 1 Work out the total time for each of the following by adding up the amounts of time shown in the first column.

Times taken for individual jobs	Total time
$1\frac{1}{2}$ hours + $2\frac{1}{4}$ hours	$3\frac{3}{4}$ hours
$\frac{1}{2}$ an hour + $\frac{3}{4}$ of an hour	$1\frac{1}{4}$ hours
$1\frac{1}{2}$ hours + $1\frac{1}{4}$ hours + $\frac{3}{4}$ of an hour	$3\frac{1}{2}$ hours
$2\frac{1}{4}$ hours + $1\frac{1}{2}$ hours + 3 hours	$6\frac{3}{4}$ hours
$1\frac{3}{4}$ hours + $1\frac{3}{4}$ hours	$3\frac{1}{2}$ hours
$2\frac{1}{2}$ hours + $1\frac{1}{4}$ hours + $\frac{3}{4}$ of an hour	$4\frac{1}{2}$ hours

- 2 Work out the total time worked by taking the amount of break time (column 2) off the time taken for work tasks (column 1).

Time taken for work tasks	Break time	Total time worked
$4\frac{1}{2}$ hours	$\frac{1}{2}$ an hour	4 hours
$7\frac{3}{4}$ hours	$\frac{1}{2}$ an hour	$7\frac{1}{4}$ hours
$3\frac{1}{2}$ hours + $4\frac{1}{2}$ hours	$\frac{3}{4}$ of an hour	$7\frac{1}{4}$ hours
$5\frac{1}{4}$ hours + $3\frac{1}{2}$ hours	$\frac{1}{2}$ an hour	$8\frac{1}{4}$ hours
$4\frac{3}{4}$ hours + $2\frac{3}{4}$ hours	$\frac{3}{4}$ of an hour	$6\frac{3}{4}$ hours



Build your skills: Pay calculations – Part 3

Activity 7

- 1 a) What is the pay per hour at 'time and a half' if the normal rate is £5.80 per hour?

$$£5.80 + £2.90 = \mathbf{£8.70 \text{ per hour}}$$

- b) How much would you earn for six hours' work at 'time and a half'?

$$\text{Six hours at } £8.70 = \mathbf{£52.20}$$

- 2 a) What is £6.40 per hour at 'time and a quarter'?

$$£6.40 + £1.60 = \mathbf{£8.00 \text{ per hour}}$$

- b) How much would you earn for eight hours work at 'time and a quarter'?

$$\text{Eight hours at } £8.00 = \mathbf{£64.00}$$

- 3 a) What is £7.20 per hour at 'time and a third'?

$$£7.20 + £2.40 = \mathbf{£9.60}$$

- b) How much would you earn for seven hours' work at 'time and a third' plus another ten hours worked at the normal hourly rate?

$$\begin{aligned} \text{Seven hours at } £9.60 &= £ 67.20 \\ \text{Ten hours at } £7.20 &= \underline{£ 72.00} + \\ &\mathbf{£139.20} \end{aligned}$$



Build your skills: Pay calculations – Part 3



Answers to questions in Part 3

Try it out

1 Wage slip

Name: Paul Anderson	Week ending: 5 July		
Works/dept. no: 3229	Tax code: 530L		
Gross pay to date: £3,168.00	Tax week: 12		
Tax deducted to date: £441.33			
Deductions:	Pay:	£	p
Income tax 52 . 80	Basic pay Hours: 30 at £6.40	192	. 00
National Insurance 21 . 12	Overtime Hours: 7½ at £8.00	60	. 00
Other 1 . 08	Gross pay	252	. 00
Total deductions 75 . 00	Deductions	75	. 00
	Net pay	177	. 00

2 Timesheet

Month: 9	Wk 1	Wk 2	Wk 3	Wk 4	Monthly totals	Rate	Total pay
Weekdays	20	20	30	20	90	£5.60	£504.00
Weekends	7½	15	5	10	37½	£7.00	£262.50
Bank holidays	7½	–	–	6¾	14¼	£8.40	£119.70
Total:							£886.20



Build your skills: Pay calculations – Part 3



Questions to check on your progress (answers)

Progress Check E, question 11: Answer C – £462

'Time and a quarter' is $\text{£}11.20 + \text{£}2.80 = \text{£}14.00$ per hour

35 hours at $\text{£}11.20 = \text{£}392$
5 hours at $\text{£}14.00 = \underline{\text{£ } 70} +$
Total pay: $\text{£}462$

Progress Check B, question 23: Answer B – 1/5

Weight of gas is $5 \text{ kg} - 4 \text{ kg} = 1 \text{ kg}$
Weight of full cylinder is 5 kg

So, the weight of gas as a fraction of full cylinder is: $\frac{\text{weight of gas}}{\text{weight of full cylinder}} = \frac{1}{5}$

Progress Check C, question 11: Answer C – 1/3

Number of employees who work 30 hours or less: $11 + 6 + 23 = 40$ employees
Total number of employees: 120 employees

So, the fraction of part-time employees is: $\frac{40}{120} = \frac{1}{3}$

Progress Check E, question 11 (amended): Answer C – £324

'Time and a half' will be $\text{£}7.20 + \text{£}3.60 = \text{£}10.80$

30 hours at $\text{£}7.20 = \text{£}216$
10 hours at $\text{£}10.80 = \underline{\text{£}108} +$
Total pay: $\text{£}324$