
Please complete this form with your details.

Learner to complete:

Your details	
Name:	
Contact number:	
Email:	
Start date:	

If you are working, write the following information:

Place of work	
Company name:	
Address:	
Postal address (if different):	
Workplace supervisor name:	
Phone number:	
Fax:	
Email:	

Contents

Before you begin	1
Words to remember	3
Your story	5
Day 1.....	7
Using calculations in workplace texts	8
Using calculations in workplace tasks	23
Interpreting mathematical information.....	39
Interpreting decimals, fractions and percentages.....	49
Using strategies to solve problems	52
What has happened on Day 1	54
Checkpoint: Day 1	55
Day 2.....	59
Making estimations	60
Checking estimations	64
What has happened on Day 2	66
Checkpoint: Day 2	67
What you have learned.....	69

Final assessment..... 71

Assessment information 73

Are you ready for assessment? 74

Final assessment overview 75

Assessment plan 76

Final assessment tasks 78

Solutions to checkpoints..... 97

Checkpoint: Day 1 97

Checkpoint: Day 2 98

Your story

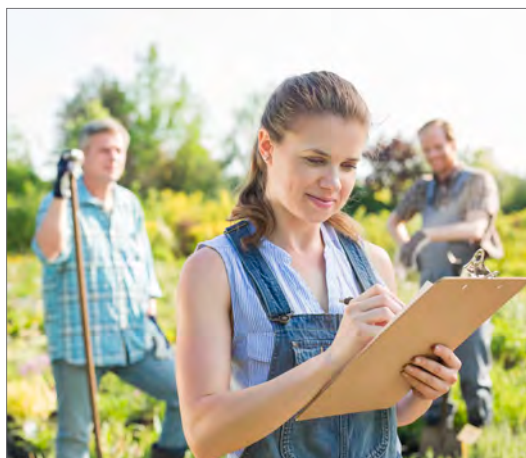
Today is your first day of work at Jerry's Garden Services. Jerry is the owner of the company and your supervisor. You will be helping Jerry.

Jerry has a truck and trailer that he uses to pick up supplies and carry his equipment. Supplies are the things Jerry uses to do the gardening work. Customers are the people who Jerry does the gardening work for.

You will help Jerry with the gardening tasks, such as:

- mixing fertiliser
- estimating costs
- working out how much customers need to pay.

Jerry explains your tasks. Tasks are things you do, to do your job.



Day 1

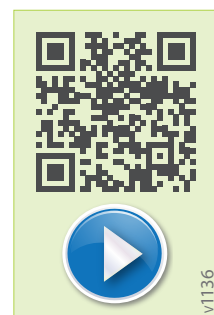
On your first day working at Jerry's Garden Services, Jerry tells you what you need to know to do your job.

Jerry uses fertiliser, which is material that is added to soil to help plants grow. Jerry uses liquid fertiliser.

To use fertiliser safely, it must be diluted. This means that water needs to be added to the liquid fertiliser. It is important that the right amount of water is added to the fertiliser to make it the right strength.

If it is not diluted enough, the fertiliser will burn the roots of plants. If it is diluted too much, the fertiliser will not help the plants grow.

Jerry needs the fertiliser to be diluted to the right strength. To work this out, you will need to make calculations.



Using calculations in workplace texts

Workplace texts are documents that are used in a workplace. Calculations are used to work out an answer to a problem. Calculations are made using numbers. Depending on where you work, there will be different calculations in different documents. For example, documents used in a hospital will have different calculations than the documents in a grocery store.



Here are some examples of workplace documents that may contain calculations:

- Job instructions
- Job specifications
- Recipes
- Catalogues
- Tables and charts
- Job sheets
- Quotes
- Bills
- Pay slips

Here is an example of an invoice for delivering three palm trees and soil to Mr Ford.

Jerry's Garden Services		
Invoice		
To: Mr Ford 45 Fourth Street Desert Springs Northern Territory 0899	From: Jerry's Garden Services 14 River Street Pearl Springs Northern Territory 0898	
Job completed: <ul style="list-style-type: none"> • Deliver and plant 3 palm trees • Deliver garden soil 		
Task	Cost	Total cost
Provide 3 palm trees	\$150.00 each	\$450.00
Plant 3 palm trees	2 hours @ \$75.00	\$150.00
1 load of garden soil	\$108.00	\$108.00
Total amount owing (including GST)		\$708.00
Date: 26 June Invoice prepared by: Jerry Green <p style="text-align: center;">Please pay this invoice within 7 days</p>		

Using a calculator

Jerry uses a calculator to work out the amount of water that needs to be added to the fertiliser. He uses a calculator because the amounts need to be accurate. A calculator is a device you can use to make calculations, or work out your answers. To use a calculator, you type in numbers and use symbols. Each symbol has a purpose.

The following table describes common symbols used on a calculator.

+ Plus or addition

To add two or more numbers together



= Equals

To calculate the answer



- Minus or subtraction

To subtract (take away) one or more numbers from another number



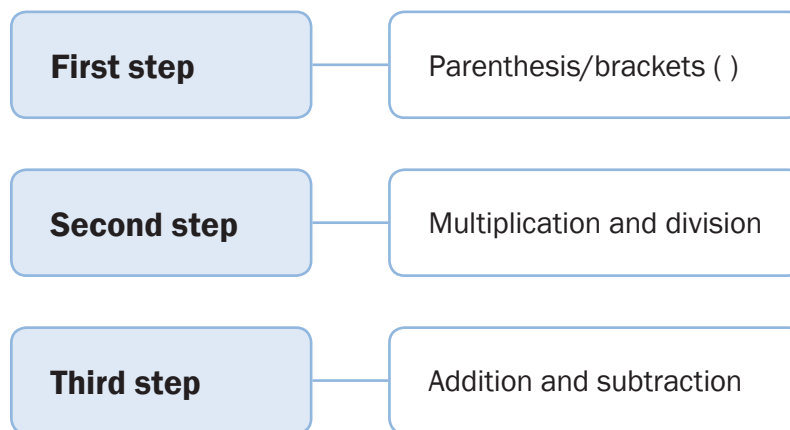
Order of operations

Some calculations need more than one operation. An operation is when addition '+', subtraction '-', division '÷' and multiplication 'x' are used to calculate answers.

When a calculation uses a combination of different operations, the operations must be done in the right order.

If operations are done in the wrong order, the answer will be wrong.

Operations must be done in this order.



If a calculation has an operation in brackets, the operation in the brackets must be done first.

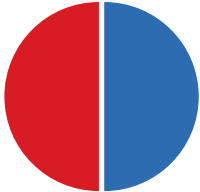
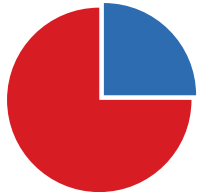

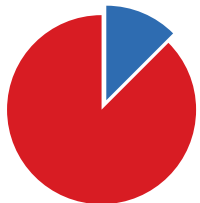
In this equation, 7×3 must be done first because 7×3 is in brackets.

$$\begin{aligned}
 4 \times 2 + (7 \times 3) &= \\
 4 \times 2 + 21 &= \\
 8 + 21 &= 29
 \end{aligned}$$

If the equation does not have brackets, multiplication and division must be done **before** addition and subtraction.

Fractions

When numbers are divided into parts, the parts are called fractions. Here are some examples of fractions.

Fraction	What it is	What it looks like
$\frac{1}{2}$	1 half of a whole part	 <p>The blue and the red parts are $\frac{1}{2}$ of the whole</p>
$\frac{1}{4}$	1 quarter of a whole part	 <p>The blue part is $\frac{1}{4}$ of the whole</p>
$\frac{3}{4}$	3 quarters of a whole part	 <p>The red part is $\frac{3}{4}$ of the whole</p>
$\frac{1}{8}$	1 eighth of a whole part	 <p>The blue part is $\frac{1}{8}$ of the whole</p>

Mixed numbers

Mixed numbers are numbers that use a whole number and a fraction.

Here are examples of whole numbers with fractions.

Number	Whole number	Fraction
$1\frac{3}{4}$	1	$\frac{3}{4}$
$4\frac{1}{2}$	4	$\frac{1}{2}$

Adding mixed numbers

To add mixed numbers, add the fraction first.

For example:

In the equation $4\frac{1}{4} + 5\frac{3}{4} =$

Step 1 Add the fractions first.

$$\frac{1}{4} + \frac{3}{4} = 1$$

Step 2 Add the whole numbers.

$$4 + 5 = 9$$

Step 3 Add the total of the fractions to the total of the whole numbers.

$$1 + 9 = 10$$

So $4\frac{1}{4} + 5\frac{3}{4} = 10$

What has happened on Day 1

On your first day of work at Jerry's Garden Services you have learned about:

- using calculations in workplace texts
- using calculations in workplace tasks
- interpreting mathematical information
- interpreting decimals, fractions and percentages
- using strategies to solve problems.

Checkpoint: Day 1

Read the questions. Place a tick ✓ in the box in front of the correct answer.

1. Job instructions have information about:
 - ☐ your job specifications.
 - ☐ how to do a job or task.
 - ☐ what needs to be done for a customer.

2. Use a calculator to work out the answer to this equation:
 $600 \div 8 =$
 - ☐ 75
 - ☐ 4800
 - ☐ 592

3. Mr Anderson orders 3 plants that cost \$75 each. You tell him it will cost \$50 for you to plant them for him. What steps would you use to work out how much Mr Anderson needs to pay you?
 - ☐ $3 \times \$75 + \$50 =$
 - ☐ $\$50 \times 3 + \$75 =$
 - ☐ $\$75 + \$50 \times 3 =$

4. What is the correct answer to this equation $123 + 0 = ?$
 - ☐ 123
 - ☐ 0
 - ☐ 1230

5. What does the symbol '%' mean?
 - ☐ Dollar
 - ☐ Percentage
 - ☐ Decimal

What you have learned

Well done. Since you have started working at Jerry's Garden Services, you have learned about:

- using calculations in workplace texts
- using calculations in workplace tasks
- interpreting mathematical information
- interpreting decimals, fractions and percentages
- using strategies to solve problems
- making estimations by:
 - ignoring decimals
 - rounding
- checking estimations.

You are now ready for the Final Assessment.

Final assessment

How to work through this final assessment

This final assessment is for the unit *FSKNUM14 Calculate with whole numbers and familiar fractions, decimals and percentages for work*, Release 1.

An assessor will look at the tasks you complete and decide if you are competent for this unit. Your assessor may be your trainer or your workplace supervisor.

This assessment has six sections.

Section	Explanation
1. Assessment information	This section has information about who the assessment is for and the aims of the final assessment.
2. Are you ready for assessment?	This section is for you to check that you are ready to do the assessment.
3. Final assessment overview	This section explains the assessment tasks you will do.
4. Assessment plan	You will complete a form with your assessor. Your assessor will talk to you about the assessment tasks. You will need to sign the form to say that you have understood what has been discussed.
5. Final assessment tasks	This section has the tasks for you to do.
6. Record of outcome	Your assessor will use the work that you do to make a decision on your competence. They will discuss your work to give you feedback and tell you about their decision.

Are you ready for assessment?

Make sure you are ready to begin the final assessment.

Complete the following checklist.

This is to review what you have learned. It will also show if you are ready to do the assessment.

Talk to your supervisor if you are not ready to do the assessment.

Key outcomes

- ☐ I can interpret mathematical information in tasks.
- ☐ I can interpret mathematical information in texts.
- ☐ I know what whole numbers are.
- ☐ I know what fractions, decimals and percentages are.
- ☐ I can use steps to do calculations.
- ☐ I can calculate with whole numbers.
- ☐ I can calculate using fractions, decimals and percentages.
- ☐ I can convert between fractions, decimals and percentages.
- ☐ I can make calculations using the right order of operations.
- ☐ I know how to apply problem-solving strategies.
- ☐ I understand estimations.
- ☐ I understand how to check estimations.
- ☐ I understand mathematical words and symbols.

Question 1: Which of the following is correct?

Answer:

- ☐ $\frac{1}{4} = .25 = 25\%$
- ☐ $\frac{1}{10} = .01 = 10\%$
- ☐ $\frac{3}{4} = .75 = 7.5\%$

Marking: ☐ Satisfactory ☐ Unsatisfactory

Question 2: Round 607 to the nearest 100.

Answer:

- ☐ 600
- ☐ 700
- ☐ 67

Marking: ☐ Satisfactory ☐ Unsatisfactory

Question 3: What is the correct answer to the following equation?
 $607 + 0 =$

Answer:

- ☐ 6070
- ☐ 607
- ☐ 6071

Marking: ☐ Satisfactory ☐ Unsatisfactory

Solutions to checkpoints

Checkpoint: Day 1

1. The learner must have placed a tick in front of 'how to do a job or task'.
2. The learner must have placed a tick in front of '75'.
3. The learner must have placed a tick in front of ' $3 \times \$75 + \$50 =$ '.
4. The learner must have placed a tick in front of '123'.
5. The learner must have placed a tick in front of 'Percentage'.
6. The learner must have placed a tick in front of ' $1/10 = .1 = 10\%$ '.
7. The learner must have placed a tick in front of '22'.
8. The learner must have placed a tick in front of 'Division'.
9. The learner must have placed a tick in front of 'fractions'.
10. The learner must have placed a tick in front of '10 times bigger'.
11. The learner must have placed a tick in front of ' $\frac{1}{4}$ '.
12. The learner must have placed a tick in front of 'Yes'.