

# SIT190 - Page - Week 2 - OnTrack Assessment

Trimester 1, 2024

## Task 1: Give-it-a-go and Give-it-a-go-again

The purpose of the Give-it-a-go and Give-it-a-go-again quizzes is to help you identify what you have understood and to identify any areas that you need further help in. This task is about reflecting on those attempts and acting on them to achieve your learning goals.

You must attempt all questions and achieve at least 60% in the Give-it-a-go-again quiz.

Usually we would expect an improvement in the Give-it-a-go-again-quiz compared to the Give-it-a-go

1. Attempt the Give-it-a-go quiz early in the week. Take a screenshot of the results.

**Note:** your screenshot should include the summary of results including the session ID.

2. Review your quiz results.

- (a) If you did not achieve full marks, identify a question that you need answered in order to understand the material.
- (b) Identify and implement a strategy to address this question. For example, you might submit a question to the weekly discussion forum, visit the HelpHub or Maths Mentors, ask the unit chair, or do further reading.
- (c) Describe the question you identified and your strategy for addressing it (2-4 sentences).

3. Attempt the Give-it-a-go-again quiz later in the week. Take a screenshot of the results.

**Note:** your screenshot should include the summary of results including the session ID. Remember, you must achieve at least 60% in this quiz.

4. Submit a short reflection (approximately 80 words) on your improvement between the Give-it-a-go and Give-it-a-go again quizzes. Explain how your strategy helped. If it was not useful, explain why and suggest what you might do next time.

Please note that in this task, you will not be penalised for not achieving full marks in either the Give-it-a-go or the Give-it-a-go-again quizzes.

## Task 2 - Equation of a Line

1. Convert the equation of the line  $3x - 5y = -10$  into the format  $y = mx + c$ .
2. Give the gradient of this line. Explain how you used the format  $y = mx + c$  to find it.
3. Give the  $y$ -intercept of this line. Explain how you used the format  $y = mx + c$  to find it.
4. Find the  $x$ -intercept showing all working.
5. Sketch this line, remembering to identify the  $x$ -axis,  $y$ -axis, the  $x$ -intercept,  $y$ -intercept and the origin on your sketch.

## Task 3 - Simultaneous Equations

1. Solve the following set of linear simultaneous equations using the elimination method and then solve the same set of equations using the substitution method:

$$3x - 7y = -2$$

$$5x + 3y = 4$$

Explain which method you found easiest to use to solve these equations and why.

2. Solve the following set of linear simultaneous equations using the elimination method and then solve the same set of equations using the substitution method.

$$2x - 8y = -3$$

$$3x - 2y = -5$$

Explain which method you found easiest to use to solve these equations and why.

3. Using either the elimination method or the substitution method, solve the following set of simultaneous linear equations and so identify if the set has no solutions or if it has infinitely many solutions.

$$9x - 3y = 21$$

$$21x - 7y = 49$$



## Submission

To successfully complete this assessment, you must submit:

### Task 1 Quizzes, Question, Strategy and Reflection

- 1.1 Screenshot of results of Give-it-a-go quiz.
- 1.2 Screenshot of results of Give-it-a-go-again quiz (You must achieve at least 60% in this quiz).
- 1.3 Describe the question you identified and your strategy for addressing it (2-4 sentences).
- 1.4 Submit a short reflection (approximately 80 words) on your improvement between the Give-it-a-go and Give-it-a-go again quizzes.

### Task 2 The Equation of the Line

- 2.1 The equation showing all working.
- 2.2 The gradient including an explanation on how you found it (1 sentence).
- 2.3 The  $y$ -intercept including an explanation on how you found it (1 sentence).
- 2.4 The  $x$ -intercept including all working.

- 2.5 The sketch of the line including all elements listed. (Do not use software to draw this sketch.)

### Task 3 Simultaneous Equations

- 3.1 The solutions and working for each method. Clearly state which method was used in both cases.  
Give your preferred method and explain why in 1-2 sentences.
- 3.2 The solutions and working for each method. Clearly state which method was used in both cases.  
Give your preferred method and explain why in 1-2 sentences.
- 3.3 The solutions and working including stating the method used. Give the number of solutions and explain why this set has infinitely many solutions or no solutions.



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## Useful Resources

Week 2 material will help you complete these tasks including:

- Treasure Chest (Equation of a line; Simultaneous equations)
- Vatch, read and think (see the videos: Equation of the line, Simultaneous equation - substitution method, Simultaneous equation - elimination method )

Note: these tasks will also require you to use the algebra we revised in Week 1.

### Sneak Peek

#### 1 Sneak peek



SQUIRE

If you have completed this week's Pass tasks, you may be interested in attempting the Credit task. We give you a brief peek at what that task involves:

- Sketching the graphs of sets of linear equations.
- For each set, explaining if there is a unique solution, infinitely many solutions or no solutions using these graphs.
- Finding the equation of a line given some information.
- Matrix transformations.

Note: The Sneak Peek is not part of the Pass On-Track task.