



Care Package

SECONDARY 2

Curriculum Information

Welcome to Grader Learning Centre!

Dear Parents,

Thank you for your interest in the AGrader Programme. This **Care Package** is specially compiled to showcase to you the AGrader curriculum for Secondary 2.

There are **2 Parts** to this Care Package:

<p>PART I: Curriculum Information</p>	<p>i. Subject Structure SMART Sheets</p> <p>Every subject's curriculum is carefully structured to allow AGrader's students to fully grasp school concepts. Have a close look at our Subject Structure SMART Sheets to fully understand how your child will benefit and improve with a structured learning plan! 😊</p> <p>ii. What's So Special About AGrader's Worksheets?</p> <p>The Unique Learning Points of the AGrader Curriculum section will explain to you what sets the AGrader Curriculum apart from other tuition providers. 😊</p>
<p>PART II: Worksheets & Annotated Solutions</p>	<p>i. Excerpts from AGrader's Worksheets (For Students)</p> <p>These are snippets of our ACTUAL worksheets, specially chosen from our worksheets to showcase the unique parts of our curriculum. <i>(Do let your child try them out! 😊)</i></p> <p>ii. Annotated Solutions (For Parents)</p> <p>These are the EXACT annotated solutions that ALL our teachers use to prepare for their lessons. They are carefully planned and created by our in-house Curriculum Team to help our teachers prepare as well as to ensure that every child receives accurate information. <i>(You may use this to go through the answers with your child after he/she has tried the questions! 😊)</i></p>

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Registration
Fees

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Your First 4 Trial Lessons!

WHAT IS SO SPECIAL About the AGrader Curriculum?

The AGrader Curriculum is specially written and crafted by our in-house Curriculum Team of subject experts, each with years of experience and deep understanding of the MOE syllabus.

At AGrader, we strive to continually improve and innovate our curriculum materials and methodologies to help our students improve their grades.

Below is a summary of some of the **Unique Learning Points** that put AGrader's curriculum materials ahead of others.

English



Deep Focus on Development of Students' **Comprehension** & **Writing** Abilities

The AGrader English Programme primarily focuses on developing our students' comprehension & writing abilities via bite-sized practices & a "Step-By-Step", "Model-Essay-Broken-Down" approach.



- ✓ Improve general knowledge and awareness of current affairs
- ✓ Critical thinking skills are honed as students make use of comparisons of related articles for their own writing
- ✓ Enhanced comprehension & writing abilities

Mathematics



Well Structured & Well Thought-Out Notes & Exercises in Increasing Difficulty to Help Students Learn in a "Step-by-Step" Approach

A carefully structured and well thought-out curriculum helps students gain confidence through a scaffolded learning approach & consistent practice.



- ✓ Improve abilities to identify similar types of questions and applying the correct methods in solving them
- ✓ Reduce careless mistakes
- ✓ Improve speed of tackling questions



Secondary English

Worksheets Specially Designed According to Exam Format in Paper 4

Reading Aloud

Spoken Interaction

Worksheets Specially Designed According to Exam Format in Paper 2

Visual Text Comprehension

Narrative Comprehension

Non-Narrative Comprehension



Current Affairs

Recent news articles are injected into the curriculum to widen student's general knowledge.



Suggested Answers

Students will be provided with suggested answers crafted by our Curriculum Writer to reference to.



AGrader's Secondary English curriculum is delivered in a cyclical approach, which gives our students a holistic exposure to the different components and papers, **according to the latest MOE syllabus.**

Worksheets Specially Designed According to Exam Format in Paper 1

Editing

Situational Writing

Continuous Writing



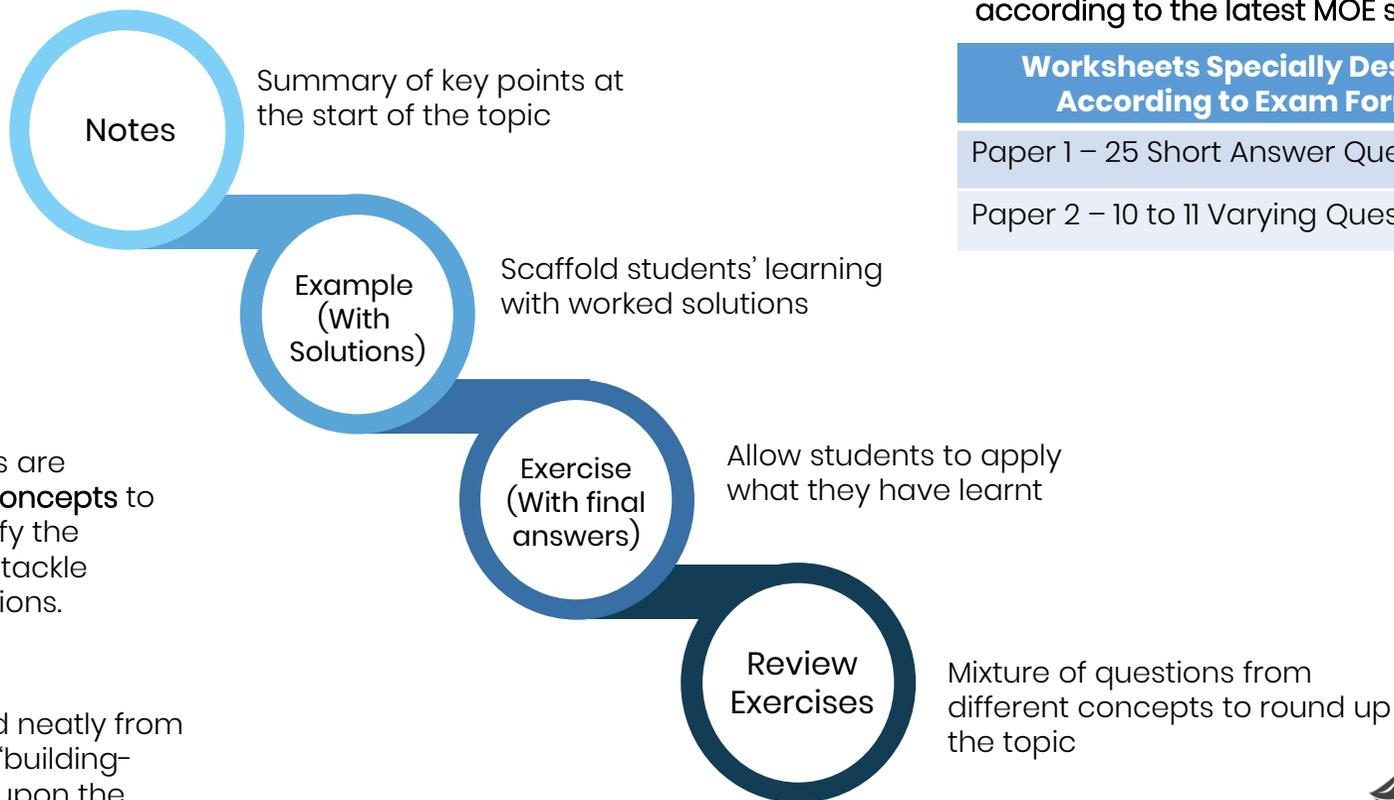
Secondary Mathematics

AGrader's Secondary Mathematics curriculum is specially designed using a "Step-By-Step", learner-directed system according to the latest MOE syllabus.

Worksheets Specially Designed According to Exam Format

Paper 1 – 25 Short Answer Questions

Paper 2 – 10 to 11 Varying Questions



✓ Organised

Examples and exercises are organised in terms of **concepts** to allow students to identify the different techniques to tackle different types of questions.

✓ Scaffolded

Concepts are arranged neatly from easiest to hardest in a "building-block" format, building upon the previous concept to enhance a learner's understanding.





Care Package

SECONDARY 2

Worksheets & Annotated Solutions

(For Students)

(For Parents)

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**SAMPLE WORKSHEET
(TRY THEM OUT!)**



Secondary 2 English

Name: _____

Date: _____

Homework:	Corrections:
Page Number(s)	Page Number(s)
	<i>Please correct and return</i>
Remarks:	





Situational Writing: Understanding Formal Letters

The formal letter is used in business situations, in some job applications and in formal situations where important information needs to be kept on record. The relationship of the writer and reader is more distant and respectful than that of a personal letter and therefore the language used should be more formal and often more precise.

However, the degree of formality still depends on the situation and the participants involved. A letter that is a legal document will be very formal indeed whereas some business letters where the participants need to appear friendly towards each other can show an element of friendship and concern for the individual.

For the examination purposes, formal letters you could be asked to write include a business letter, a letter to the editor of a newspaper or magazine, and letters asking for help or permission.



The sentences below are written in a personal tone. Rewrite the sentences in a manner which is suitable for formal situations. The first question is a worked example.

1. Whenever I walk into a spa, there is always gentle background music playing.

Gentle background music is always played at spas.

2. People should not spend money with reckless abandon.

3. Those teenagers always make a nuisance of themselves, so they are no longer allowed to hang around that area.

4. Why don't you take tennis lessons so that you can improve?

5. The students jumped for joy when they found out that exams were cancelled.

6. The authorities are trying to put a stop to smoking.





Situational Writing

You should look at the poster on the next page. Study the information carefully and plan your answer before beginning to write.

The poster below contains the details of several seminars on leadership conducted by Skillsoft Singapore. The organiser has kindly extended an invitation to students in your school. However, due to limited seats, it has been decided that only selected students will be able to attend. To allow more people to benefit, each student may attend a maximum of one seminar.

Write your letter to your teacher, stating clearly:

- which of the seminars you would like to attend
- why you have chosen this seminar
- any leadership experience that may be relevant
- how you intend to apply what you learn from the seminar

Write your letter in **clear, accurate English** and in an **earnest, persuasive tone**, demonstrating your interest in attending the seminar and how it may be useful to you.

You should **use your own words** as much as possible.



Requirements of the Situation:

1) Which part of the question tells you that this is to be a formal letter? _____

2) What is the purpose of this situational writing? _____

3) Who is the audience of this situational writing? _____

4) How does the context help you scope your response?





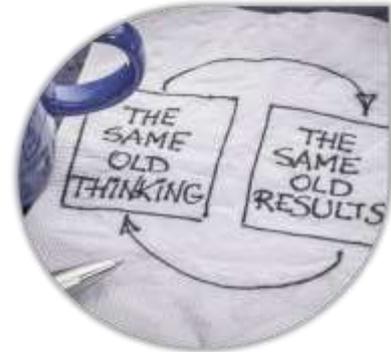
Situational Writing: Poster

LEAD. INSPIRE. GROW.

LEADERSHIP SEMINARS BY SKILLSOFT

MOVING BEYOND THE LEADERSHIP PLATEAU

- Recognise when you need to change your approach to leadership
- Learn about habits that hold leaders back
- Create plans with actionable steps



LEADING WITH EMOTIONAL INTELLIGENCE

- Learn to connect with & inspire others
- Find out how to build & sustain impactful relationships
- Practise using emotional intelligence

THE BUILDING BLOCKS OF LEADERSHIP

- Understand people's expectations
- Learn how to motivate others
- Discover your personal leadership style and how to adapt to others' needs





Situational Writing: Format for Formal Letter

Block 3 Orchard Road

#06-91

Singapore 145145

→ *Your address. Addresses should be 2-3 lines.*

Ms Chan

Form Teacher of Class 2B

Woodgrove High School

156 Wayland Road

Singapore 156156

→ *The person / organisation you are writing to.*

→ *Their address. Addresses should be 2-3 lines.*

1 November 2018

→ *Date.*

Request to Attend Leadership Seminar

↳ *Subject line should be underlined*

Dear Ms Chan

→ *General greeting. Include name of recipient if it is provided in the question.*

[main text]

[main text]

[main text]

→ *The main points that need to be covered in your situational writing should be organised in a couple of paragraphs. Remember that you should include all relevant details, including the greetings for a personal email.*

I look forward to your favourable reply.

→ *Conclusion.*

Yours Sincerely

–signature–

Ho Boon Leong

Secondary 2B, Woodgrove High School.

→ *Sign off, signature, name and title (if applicable)*





Situational Writing: Planning Your Formal Letter

Given that you are required to choose one seminar out of the three that are listed in the poster, your choice should be substantiated with why you chose one. Naturally, you should more extensively describe the choice that you have made, using the details that are given to you in the poster and furnishing other details as you find necessary.

Read the poster in detail. In the space below, write down the target audience of each seminar, which should shape your idea of why and how each one may or may not be beneficial. Remember that this does not mean you show that the other seminars are worthless, only that it may not, in your opinion, be the most appropriate for you. Since you need to say which option you have chosen and explain why it is the best choice, being able to systematically address these points would help you in your writing. One worked example is included to guide you.

Moving Beyond the Leadership Plateau	Leading with Emotional Intelligence	The Building Blocks of Leadership
Target audience		
Experienced leaders who are facing difficulties		
Potential benefits		
<p>Change is the only constant. Solutions that have worked for leaders in the past may lose their efficacy as time goes by. To resolve this, leaders first must recognise that it is necessary to change their approach. Then, they need to plan how the changes can be implemented.</p> <p><i>(These details are taken from the description in the poster but rephrased to express potential benefits.)</i></p>		
Why this may not be the most helpful		
This may not be useful for leaders who are new to leadership and require guidance on the earlier stages of building rapport with their team.		



**SAMPLE WORKSHEET
(TRY THEM OUT!)**



Secondary 2 Math

Topic: Proportion

Name: _____

Date: _____

Homework: Page Number(s)	Corrections: Page Number(s) <i>Please correct and return</i>
Remarks: 	



Summary

1. Let's say we have two variables x and y . If the relationship of x and y is:
- If **y increases** as x increases, then y varies **directly** proportional to x .
 - If **y decreases** as x increases, then y varies **inversely** proportional as x

2. If y is *directly proportional* to x ;

$$y = kx, \text{ where } k \text{ is a constant}$$

3. If y is *inversely proportional* to x ;

$$y = \frac{k}{x}, \text{ where } k \text{ is a constant}$$

4. **Percentage change (Recap):**

- If a constant value p is **increased by 200%**.
then $p + 2p = 3p$
the new value will be $3p$ after the increase.
- If a constant value p is **decreased by 20%**.
then $p - 0.2p = 0.8p$
the new value will be $0.8p$ after the increase.

- **Percentage Increase (where new value > original value)**

$$\text{Percentage Increase} = \frac{\text{New value} - \text{Original Value}}{\text{Original Value}} \times 100\%$$

- **Percentage Decrease (where new value < original value)**

$$\text{Percentage Decrease} = \frac{\text{Original value} - \text{New Value}}{\text{Original Value}} \times 100\%$$



Example (Proportion involving Real Practical Situations)

Sixteen workers can build a wall in 25 days.

How many workers are needed if the wall is to be built in 10 days?

Solution

Method 1: Algebraic method

Let number of days be x , and number of workers be y .

$$y = \frac{k}{x}$$

$$16 = \frac{k}{25}$$

$$k = 400$$

$$y = \frac{400}{x}$$

Sub $x = 10$

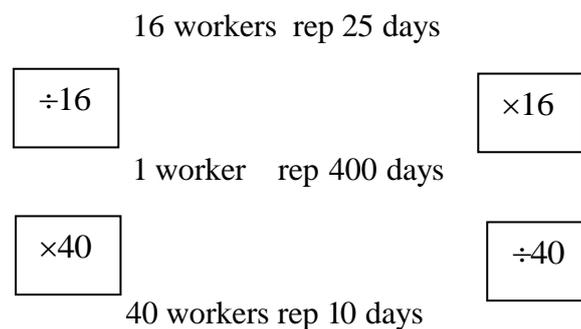
$$y = \frac{400}{10}$$

$$y = 40$$

In 10 days, number of workers needed to build a wall are 40workers.

Method 2: Unitary method

Since the amount of workers needed to complete the job is INVERSELY proportional to the amount of time needed to complete the job,



Hence, 40 workers will be needed in order to build a wall in 10 days



Exercise

1. If 12 men can build a model in 35 days, calculate the number of men required to build a similar model in 28 days, assuming if they work at the same rate.

[Ans : 15 men]

Review Exercise

It takes 24 men to build a house in 50 days. Given that all the men work at the same rate, if they wish to finish building the house in 20 days instead, how many *more men* needs to be hired in order to build the same house in 20 days?



ANNOTATED SOLUTIONS



Secondary 2 English

Name: _____

Date: _____

Homework:	Corrections:
Page Number(s)	Page Number(s) <i>Please correct and return</i>
Remarks:	



Situational Writing: Understanding Formal Letters

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However, the degree of formality still depends on the situation and the participants involved. A letter that is a legal document will be very formal indeed whereas some business letters where the participants need to appear friendly towards each other can show an element of friendship and concern for the individual.

For the examination purposes, formal letters you could be asked to write include a business letter, a letter to the editor of a newspaper or magazine, and letters asking for help or permission.



The sentences below are written in a personal tone. Rewrite the sentences in a manner which is suitable for formal situations. The first question is a worked example.

- Whenever I walk into a spa, there is always gentle background music playing.
Gentle background music is always played at spas.
- People should not spend money with reckless abandon.
People should refrain from spending money impulsively.
- Those teenagers always make a nuisance of themselves, so they are no longer allowed to hang around that area.
Those teenagers often cause trouble, therefore they are now prohibited from loitering in the vicinity.
- Why don't you take tennis lessons so that you can improve?
I propose that you attend tennis lessons if you would like to improve.
- The students jumped for joy when they found out that exams were cancelled.
The students were overjoyed upon receiving the news that examinations were cancelled.
- The authorities are trying to put a stop to smoking.
The authorities are putting measures in place to curb smoking.



Situational Writing

You should look at the poster on the next page. Study the information carefully and plan your answer before beginning to write.

The poster below contains the details of several seminars on leadership conducted by Skillsoft Singapore. The organiser has kindly extended an invitation to students in your school. However, due to limited seats, it has been decided that only selected students will be able to attend. To allow more people to benefit, each student may attend a maximum of one seminar.

Write your letter to your teacher, stating clearly:

- which of the seminars you would like to attend
- why you have chosen this seminar
- any leadership experience that may be relevant
- how you intend to apply what you learn from the seminar

Write your letter in **clear, accurate English** and in an **earnest, persuasive tone**, demonstrating your interest in attending the seminar and how it may be useful to you.

You should **use your own words** as much as possible.



Requirements of the Situation:

1) Which part of the question tells you that this is to be a formal letter? _____

Clue: "only selected students will be able to attend" shows that an official evaluation will be carried out and suggests that this is a formal letter.

2) What is the purpose of this situational writing? _____

Indicate interest in attending one of the leadership seminars.

3) Who is the audience of this situational writing? _____

Your teacher, hence the tone should be polite.

4) How does the context help you scope your response? _____

Given that students must be selected in order to be able to attend, the letter should demonstrate a sincere, keen interest in the seminar and show that the student has put due thought into how he/she may benefit from it. The letter should also include any relevant personal experiences which will convince the teacher as to why the selected seminar is specifically suited for the student.



Situational Writing: Poster

LEADERSHIP SEMINARS BY SKILLSOFT

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#06-91 → *Your address. Addresses should be 2-3 lines.*
Singapore 145145

Ms Chan
Form Teacher of Class 2B → *The person / organisation you are writing to.*
Woodgrove High School → *Their address. Addresses should be 2-3 lines.*
156 Wayland Road
Singapore 156156

1 November 2018 → *Date.*

Request to Attend Leadership Seminar → *Subject line should be underlined.*

Dear Ms Chan → *General greeting. Include name of recipient if it is provided in the question.*

[main text] → *The main points that need to be covered in your situational writing should be organised in a couple of paragraphs. Remember that you should include all relevant details, including the greetings for a personal email.*

[main text]

[main text]

I look forward to your favourable reply. → *Conclusion.*

Yours Sincerely
-signature- → *Sign off, signature, name and title (if applicable)*
Ho Boon Leong
Secondary 2B, Woodgrove High School.



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Change is the only constant. Solutions that have worked for leaders in the past may lose their efficacy as time goes by. To resolve this, leaders first must recognise that it is necessary to change their approach. Then, they need to plan how the changes can be implemented. <i>(These details are taken from the description in the poster but rephrased to express potential benefits.)</i>		Note to Teachers: Accept any sensible phrasing of the points taken from the webpage above. Emphasis to students that they should <u>paraphrase</u> the information given to them by choosing the relevant details that they can most clearly write about. They should consider these details in relation to the 4 points they need to cover.
Why this may not be the most helpful		
This may not be useful for leaders who are new to leadership and require guidance on the earlier stages of building rapport with their team.		



SOLUTIONS



Secondary 2 Math

Topic: Proportion

Name: _____

Date: _____

Homework:	Corrections:
Page Number(s)	Page Number(s) <i>Please correct and return</i>
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Exercise

1. If 12 men can build a model in 35 days, calculate the number of men required to build a similar model in 28 days, assuming if they work at the same rate.

[Ans : 15 men]

Solution

Method 1 (Algebraic Method)

Let number of days be x , and number of men be y .

$$y = \frac{k}{x}$$
$$35 = \frac{k}{12}$$
$$k = 420$$
$$y = \frac{420}{x}$$

$$\text{Sub } x = 28$$

$$y = \frac{420}{28}$$
$$y = 15$$

15 men would be required to build the same model in 28 days.

Method 2: Unitary method

Since the amount of workers needed to complete the job is INVERSELY proportional to the amount of time needed to complete the job,

12 men rep 35 days

÷12

×12

1 man rep 420 days

×15

÷15

15 men rep 28 days

Hence, 15 men would be required to build the same model in 28 days.

Review Exercise

It takes 24 men to build a house in 50 days. Given that all the men work at the same rate, if they wish to finish building the house in 20 days instead, how many *more men* needs to be hired in order to build the same house in 20 days?

Solution

Method 1 (Algebraic Method)

In any real-world practical situation, we understand that the amount of manpower needed to complete a job is always INVERSE PROPORTIONAL to the amount of time needed to complete the job. Therefore,

Let number of days be x , and number of men be y .

$$y = \frac{k}{x}$$

$$24 = \frac{k}{50}$$

$$k = 1200$$

$$y = \frac{1200}{x}$$

$$\text{Sub } x = 20$$

$$y = \frac{1200}{20}$$

$$y = 60$$

A total of 60 men would be required in order to build the same house in 20 days.

$$\text{Hence, } 60 - 24 = 36$$

36 more men will be required to help out finish building the same house in 20 days

Method 2: Unitary method

Since the amount of workers needed to complete the job is INVERSELY proportional to the amount of time needed to complete the job,

24 men rep 50 days

$$\boxed{\div 24}$$

$$\boxed{\times 24}$$

1 man rep 1200 days

$$\boxed{\times 60}$$

$$\boxed{\div 60}$$

60 men rep 20 days

A total of 60 men would be required in order to build the same house in 20 days.

$$\text{Hence, } 60 - 24 = 36$$

36 more men will be required to help out finish building the same house in 20 days