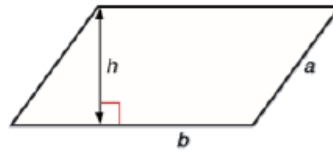
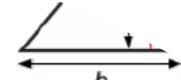


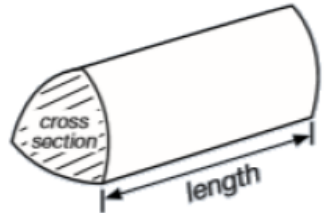
$$\text{Rectangle area} = l \times w$$

$$\text{Parallelogram area} = b \times h$$



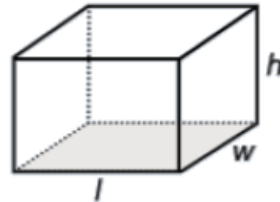



$$\text{Triangle area} = \frac{b \times h}{2}$$



$$\text{Prism volume} = \text{area of cross section} \times \text{length}$$

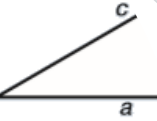
$$\text{Cuboid volume} = l \times w \times h$$



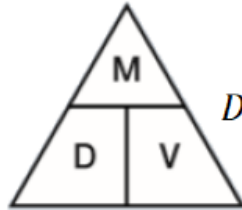


$$\text{Cylinder volume} = \pi r^2 h$$

$$\text{Pythagoras' Theorem: } a^2 + b^2 = c^2$$



$$\text{Speed} = \frac{\text{distance}}{\text{time}}$$



$$\text{Density} = \frac{\text{mass}}{\text{volume}}$$



$$\text{Pressure} = \frac{\text{force}}{\text{area}}$$

$n$  is the number of sides

$$\text{Sum of interior Angles} = (n - 2) \times 180$$

$$\text{REGULAR polygon} = \frac{360}{n}$$

Constructing Pie Charts

$$\text{Angle} = \frac{\text{frequency}}{\text{total}} \times 360$$

Love

GCSE  
Mathematics  
at The Friary

Key formulae can be found in  
student planners

# About the Maths exam



Exam Board

Edexcel



Tiers

Higher (Grade 4-9)  
Foundation (Grade 1-5)



3 Papers

1 Non-calculator

2 Calculator

Each 1.5hrs long

**Pearson Edexcel**  
Level 1/Level 2 GCSE (9-1)  
**Mathematics**  
Paper 1 (Non-Calculator)  
Foundation Tier  
Thursday 24 May 2018 – Morning  
Time: 1 hour 30 minutes  
Paper Reference: 1MA1/1F

**Instructions**

- Use **black** ink or ball-point pen.
- Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- Calculators may not be used.**

**Information**

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets.
- Use this as a guide as to how much time to spend on each question.

**Advice**

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

**Pearson Edexcel**  
Level 1/Level 2 GCSE (9-1)  
**Mathematics**  
Paper 2 (Calculator)  
Foundation Tier  
Thursday 7 June 2018 – Morning  
Time: 1 hour 30 minutes  
Paper Reference: 1MA1/2F

**Instructions**

- Use **black** ink or ball-point pen.
- Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- Calculators may be used.**

**Information**

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets.
- Use this as a guide as to how much time to spend on each question.

**Advice**

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

**Pearson Edexcel**  
Level 1/Level 2 GCSE (9-1)  
**Mathematics**  
Paper 3 (Calculator)  
Foundation Tier  
Tuesday 12 June 2018 – Morning  
Time: 1 hour 30 minutes  
Paper Reference: 1MA1/3F

**Instructions**

- Use **black** ink or ball-point pen.
- Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- Calculators may be used.**

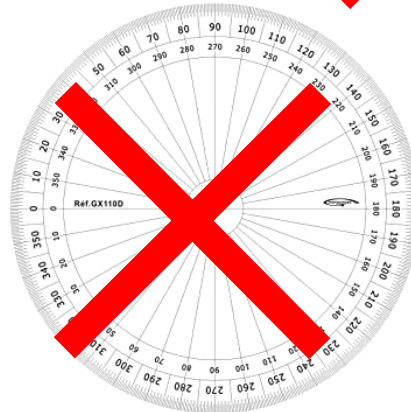
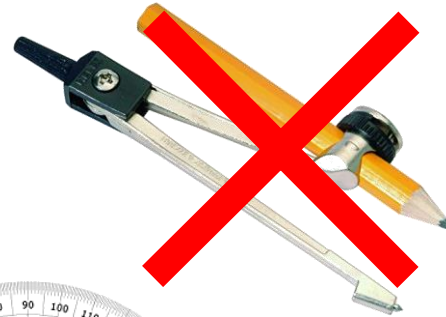
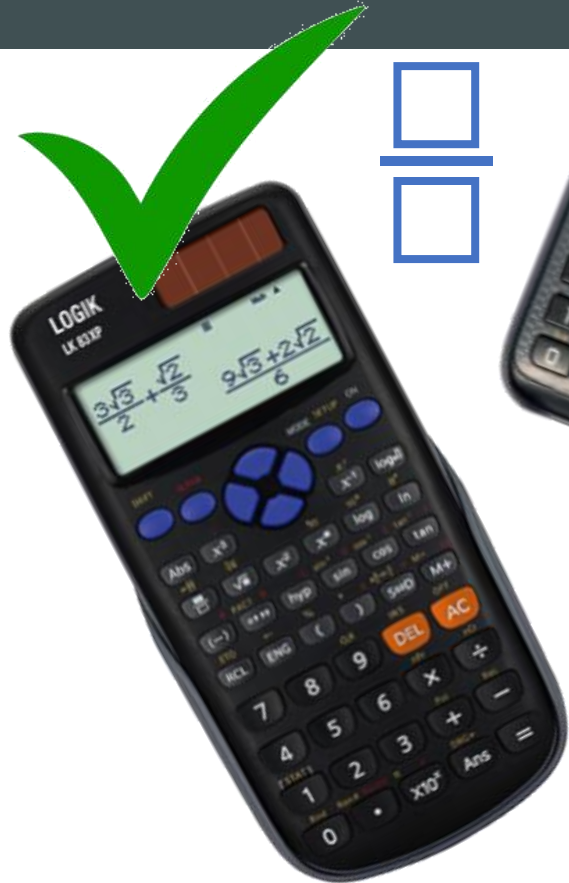
**Information**

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets.
- Use this as a guide as to how much time to spend on each question.

**Advice**

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

# Equipment



Calculator

+

All other standard  
equipment for lessons  
(pen, pencil, ruler)

Students DO NOT need a  
pair of compasses, or a  
protractor as we lend  
those out when we need  
them

# Assessment

- 1 end of half term assessment
- 2 learning checks throughout each half term
- Focus is current topic with some previous content addressed
- Booster session before end of half term assessment
- Revision homework set and checked for completion
- Revision in class
- Focus on exam technique

Y10 Assessment 5  
Foundation

## Foundation Learning Check 1

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Time: 40 minutes

Marks: 32

AG: \_\_\_\_\_

Score: \_\_\_\_\_/45

Target Grade: \_\_\_\_\_

TOTAL: 132

TG: \_\_\_\_\_

q1. Write these numbers in order of size. Start with the smallest number.

52 102 25 120 55


(b) Write these numbers in order of size. Start with the smallest number.

6 -2 0 -5 3

Topics		
AO1 FLUENCY: Inequalities- listing integers		
AO1 FLUENCY: Inequalities- solving linear inequalities		
AO1 FLUENCY: Inequalities- representing on a number line		
AO1 FLUENCY: Sequences- generating and continuing		
AO1 FLUENCY: Sequences- finding the nth term		
AO1 FLUENCY: Sequences- justifying why a number is in a sequence		
AO1 FLUENCY: Angles in Parallel Lines- finding an angle		
AO1 FLUENCY: Angles in Parallel Lines- Justifying		
AO1 FLUENCY: Angles In Polygons- calculating missing angles		
AO2 REASONING: Solving an inequalities problem		

Y10 Assessment 1  
Higher Tier – Set 2

Term: Term 1a



Assessed Grade: \_\_\_\_\_

	+	T
Column vectors		
Calculating with speed, distance, time		
FLUENCY: Finding the density of liquids		
AO1 FLUENCY: Constructing cumulative frequency curves		
AO1 FLUENCY: Graphing Inequalities and Identifying regions		
AO1 FLUENCY: Comparing cumulative frequency curves and box plots		
AO2 FLUENCY: Vector geometry in terms of $\mathbf{a}$ and $\mathbf{b}$		
AO2 REASONING: Vector geometry involving ratios		
AO2 REASONING: Identifying mistakes in vector geometry		
AO3 PROBLEM SOLVING: Speed distance time problem		

# Home Learning

## Homework - weekly

Name: \_\_\_\_\_

### 10Y2 – Maths Homework 1



#### Contents

Section A: Algebra Key Skills

Section B: Area of 2D shapes

Section C: Volume of prisms

#### Section A: Algebra Key Skills

Q1. Expand and simplify  $(m + 7)(m + 3)$

.....(2)

Q2.

(a) Expand and simplify  $3(y - 2) + 5(2y + 1)$

.....(2)

(b) Simplify  $5u^2w^4 \times 7uw^3$

.....(2)

Q3.

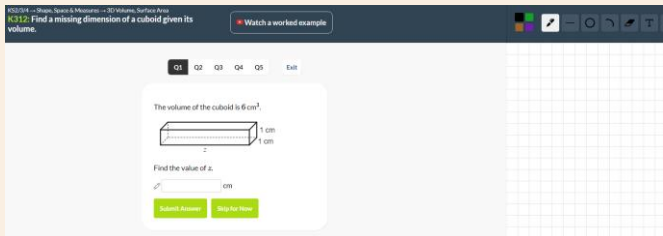
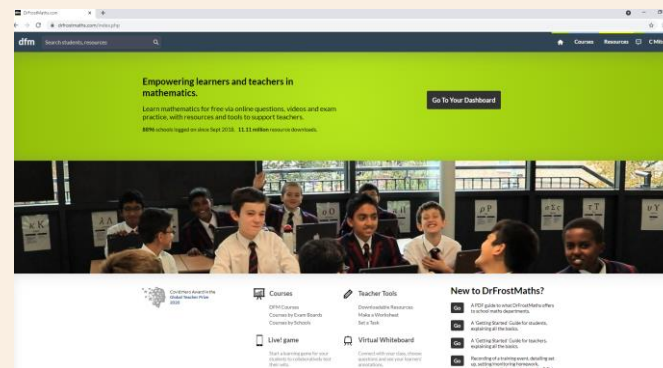
(a) Factorise  $y^2 + 27y$

.....(1)

(b) Simplify  $(b^2)^2$

.....(1)

## Dr Frost Website



## Homework Information

- Expect it weekly
- Expect previous and current topics to appear

## Dr Frost Information

- Login is school email address, password is "friary"
- Earn points – links to house points and student of the week
- In class studying, revision, new learning

# Topic Overview for this half term

## Set 3B/4

- Powers
- Decimals and rounding
- Factors, multiples and primes
- Expressions, substitution and formulae
- Expanding and factorising

## Set 3A

- Expanding brackets with single and double brackets
- Factorising to single and double brackets
- Solving Quadratic Equations
- Standard form – writing and calculating with very large and very small numbers.

## Set 1

- Volumes of complex 3D shapes – spheres, cones, frustums
- Vectors – column, geometric and proof
- Congruent shapes, conditions and proof

## Set 2

- Volumes of 3D shapes – prisms, pyramids, spheres, cones
- Vectors – column and geometric
- Cumulative Frequency Curves
- Box Plots
- Comparing data sets graphically

# KEY DATES THIS TERM

## REVISION SESSIONS COMING UP

Wednesday 12<sup>th</sup> October

### ***HALF TERM***

Wednesday 14<sup>th</sup> December

## ASSESSMENT DATES

w/c 19<sup>th</sup> September

w/c 3<sup>rd</sup> October

**w/c 17<sup>th</sup> October**

### ***HALF TERM***

w/c 14<sup>th</sup> November

w/c 28<sup>th</sup> November

**w/c 12<sup>th</sup> December**



# What can students do to improve their Maths?

## Websites

<https://www.dr frostmaths.com/>

<https://www.mathsgenie.co.uk/>

<https://corbettmaths.com/>

## Revision Workbooks

Resources on these websites include

- Video tutorials
- Exam questions
- Textbook questions
- Full solutions
- Revision pages
- Games

# PRACTISE MAKES PERMENANT

