

## Ways to Succeed in Maths at Poynton High School

### Keep a well organised maths book and fully stocked maths set

Take pride in your work, title every lesson, margin and number every page. Keep all your work tidy, copy down all the notes and make sure you complete all the required work for the lesson

Make sure that you bring with you all of the following:

- Your maths book
- Pens – Black/Blue pens to write with and red pens to mark. Stock up on them in case they run out
- HB Pencils
- A glue stick to glue sheets in
- A maths set (Example)
- A scientific calculator, preferably Casio (Example)
- *You do not need Correction fluid, not only can it be messy but in maths mistakes are a good thing! We can pick apart any wrong steps if we can see them.*

When solving complex maths problems it's always best to write down all your working clearly and neatly in your book. It helps you understand a very clear process and if things go wrong then you will find it easier to retrace your steps and spot your error.

Not only will neatness make it easier for you to systematically solve a problem and avoid mistakes but many exercises require full complete answers with all working shown, so it's a good habit to get into!

### Plan problems

Have a basic strategy to attack a problem can help you get through it much easier.

Read the whole question twice before you even write anything. There is nothing more frustrating than completing a lot of work that you don't need to do!

Think about what skills and concepts you'll need to solve the problem. Where have you seen a problem like this before? Have a look at your Maths book, there will probably be something in there that will help. What did you do last time? What maths skills do you think you can apply to this problem? Even if you can't get to the final answer, you may get marks for your thinking. For word problems highlight or underline the key words. You may even find a sketch helpful to visualise the problem. This will help embed what the important words are and what the question actually wants you to solve.

Approach the problem clearly and systematically. It may be tempting to throw as much maths down on the page as you can, but that can become confusing and is often where details are missed. In setting your work out clearly your teacher be able to award you the maximum marks they can and you will find it much easier to check your answer!

And finally, the answer. Check that your answer makes sense. Has it answered the question? Is the answer a reasonable answer? If either of these seem off, go back over your work and check for mistakes or errors.

### **Work to the best of your ability**

At PHS we want all of our students to try to be the best that they can be. Arrive on time to your lessons, with all your equipment and an eagerness to learn. Stay focused and if you become unsure or stuck, ask for help. If you feel reluctant to raise your hand in class because you feel like you're the only one that doesn't get it (you're probably not!), then why not make a note of it in your book? There will be opportunities to ask your teacher during the lesson when your class are working on the task or you can discuss it with neighbour.

Don't rush through your work, this isn't a race! We would rather you walk out of the lesson feeling that you nailed the work than answering more questions than everyone else. We want you to be confident in your ability and not just become a machine to answer questions. Give yourself the chance to learn, don't make excuses or put obstacles in your way. If you're open to learning then the ability will come.

### **Respond to feedback**

Maths can sometimes feel like a very tough subject, "You're either right or you're wrong." However even a "wrong answer" has its merits. Don't worry too much about getting the answer "right" all the time concentrate on that we are learning all the time. Besides, even your teachers will make mistakes! Maths is a subject where we develop our understanding and learn from everything we do and the more you practice, the better you will get.

Along the way you will get feedback to tell you how you're doing. This may be from your teacher, your peers or even the computer, whenever this happens or however this happens, make sure you respond to the advice that has been given. If you complete a piece of homework and score 1 out of 20, then don't look at that as a lost cause, look to get better! It may be that you misunderstood the process and a small fix will solve a bigger problem. Go back over it with a friend or your teacher and you may realise that it won't take much to correct your misunderstanding. Don't dwell on it or ignore the issue, it won't get better hidden away and it certainly won't get better if you don't ask for help!

### **Schedule study time**

Home learning is a great opportunity to develop the skills learnt in class. Your teachers will be able to check on your progress and see if you need any extra support. All homework will be set in class and made available on Google Classroom for both you and your parents to access. You will be given a homework timetable at the start of the year so make sure you give yourself time to complete each task.

Look over your notes regularly, glue in any loose sheets, respond to any feedback and recognise what your strengths and weaknesses are, then when you're given the chance to work over something you know exactly what help you will need.

Home learning doesn't have to be lonely learning either. It's always a good idea to study in a group as you can help each other out when you become stuck, however remember this is your chance to show your understanding. If you're stuck, don't get it or need help, be honest. Tell your teacher with a little note on the work or go to see them out of class, don't copy someone else's work!

Reward yourself with something you enjoy after you complete your study. It will help motivate you to complete the task and associate maths and working at home with something positive!

## Surround yourself with maths

There is more to maths than what you see in class. Look around you and you will see maths everywhere.

Incorporate your problem solving skills into a daily routine to keep your skills sharp and recognise where maths exists around you, you could look to solve problems involving for example

- Discount Sales
- Speeds of travel
- Complex geometric problems
- Transport timetables

Learn about the maths that we do and why we do it. It will help you understand what the purpose of each lesson is. Your understanding will become deeper and more productive. You may even develop an interest in it! You could think about

- Who Pythagoras was and why triangles are so important
- Why algebra uses letters
- What Charles Gauss did in class which annoyed his teacher

Have fun with Maths!

You don't have to be studying hard to get better at maths. Why not look up the following for inspiration

### Board Games

Prime Climb  
Numbuz  
Sum Fun  
Triominos  
OK Play  
Proof!  
Splendor  
Five Tribes

### Apps

Mathemagics  
Numtris  
2048  
Threes  
Math Master

### Puzzles

Sudoku  
Ken Ken  
Kakuro  
Numbricks  
Logic Puzzles

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