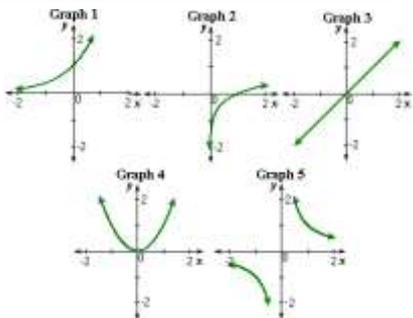


Goals



Topic: Functions and Relations

- understand the concepts of relations and functions
- understand the inter-connectivity of the written, graphical and algebraic forms of relations
- develop mathematical models with various functions
- use algebraic methods and graphing software to identify the key features of functions.

This week's focus:

- Curve recognition, domain and range
- Using CAS to sketch functions

Theoretical Components

You will get your Assignment on the Monday lesson – this is a group assignment.

Remember to continue with work for domain and range, functions and relations

13Q test yourself:

<https://goo.gl/F1aCoM>

More practice:

<https://goo.gl/3VYPiA>

You will need to have a good working knowledge of domain and range, functions and relations for the assignment this term.

Make sure you have completed all the tasks on www.mathspace.co to date.

Common functions:

<https://goo.gl/cQRx72>

More functions and their graphs:

<https://goo.gl/SKfNI4>

Common Graphs:

<https://goo.gl/DIY2h>

Graphing Functions:

<https://goo.gl/bbzGzp>

Practical Components

Familiarise yourself with the features of functions listed: Linear, Quadratic, Square Root, Cubic, Hyperbola (Reciprocal function), Semi-Circle, Exponential, Absolute. Be aware of other functions such as logarithmic, circular functions (the trigonometric functions – sine, cosine and tangent)

Text chapter below was posted in Week 10 on Google Classrooms. See pdf from wk 10.

Please attempt the following questions:

2C Factorising quadratic expressions

Q7 (all), Q9.

2D Factorising by completing the square

Q2(a, c, e, g, i)

2E Solving quadratic equations

Q2(a, d, g, h), 3(a, d, g, j), 8, 10, 12

2G Quadratic formula

Q1 a, h Q2(all),8,10,13

2H Discriminant

Q5(all)

2I Questions 6 and 7

2J Graphs (using your algebraic manipulation skills)

2K Using CAS to solve quadratics

2L Simultaneous quadratic and linear equations

Qs 1(j, l, n, p), 3-5, 7-10

Please try more questions if you need and see Jacqueline or Toby for assistance. A CAS calculator will be a necessity for some of these questions.

Investigation

You need complete Wk11 investigation **before** starting assignment **then** start your Assignment with the concept sketch and hand in this week.

QFO

Quiz/Forum/Other

Remember to scan in when you come to the Maths Area and when you leave. If you wish to work elsewhere other than the maths open area or adjoining rooms you must discuss this option with Jacqueline/Toby.