Similarities and differences in the graphs of degree 1 polynomials.

PIERRE-SIMON LAPLACE

- All linear equations and cross both the x,y axes once. - Do not all have positive slopes. -Cross the x axis at different points.

ERNST KUMMER

All the polynomials of degree one are linear. Each polynomial has a different constant term which makes the y-intercept of each function different. Similarly, the leading coefficients differ in each function creating different x-intercepts expect for function one and two which share the x-intercept of -1.

MARY EVEREST BOOLE

The similarity is the are all straight line and both though zero The different are one of the line though different quadrant form other two lines and direction is different

MARJORIE RICE

Similarities: They are all straight lines Differences: They all cross the y axis at a different intercept

JAKOB STEINER

Similarities: linear, the line is infinite Difference: x and y intercepts

GEORG CANTOR

they are straight,but they cross x-int in different places. some are goes up, some are goes down.

JULIA ROBINSON

the lines are straight. some of lines are down or up

DIOPHANTUS

The functions are translated either left or right (horizontal translation) from y=x on the graph depending on the constant. They are all straight lines.

FELIX KLEIN

The polynomial functions with degree 1 all have linear growth, however the slopes are different because of the different y-intercepts and x-intercepts

MARIA AGNESI

y=kx+b Similarities:all of those are stright line Differences:"k" make sure slope. "b" make sure intercept-y. So they are different.

MARJORIE SENECHAL

The degree 1 polynomials are all straight and are increasing, but have different x and y intercepts.

JEAN SPRINGER

Similarities: All polynomials are linear (straight) Differences: All polynomials cross the y-axis at different points

KAREN UHLENBECK

Similarities: All polynomials have a degree of 1 and are linear. Differences: All polynomials intercepts the y-axis at different points

ADRIAN SCOTT DUANE

one similarity is that the lines are all straight. one difference is that they hit different numbers on the y-axis and x-axis

HERMANN GRASSMANN

There are all infinite straight lines Different directions Different x-intercepts and y-intercepts

RENÉ DESCARTES

They are all linear but have different x and y intercepts.

GOTTHOLD EISENSTEIN

They all are straight lines. All cross the x axis and y axis, but at different points.

LIU HUI

The similarities are they are straight and they all cross x. The differences are the point they cross on x are different .

AUGUSTIN CAUCHY

All the lines are straight, however all have different slopes. They all cross the X and Y axes at different points.

MICHAEL ATIYAH

They are all straight (linear), and cross the x axis and y axis. They differ by their x and y intercept.

GOTTLOB FREGE

All three polynomial functions are linear, they are also translated from the function y=x. They also have different x and y intercepts.

MINA REES

They all are linear and are translated from the function y=x. The difference is their y and x intercepts.

GIUSEPPE PEANO

The Functions are all translated from the function y=x. It is a horizontal translation depending on the constant.

ANNIE EASLEY

The similarities are that each graph is linear,but shifted left or right depending on the leading coefficient. the difference is that the positioning on the x-axis.

CATHLEEN MORAWETZ

All three are linear and the lines cross with each other. A difference is that they all have a different y-intercepts.

LENORE BLUM

Similarities: an infinitely long straight line has x and y intercepts differences: heading different directions with different slopes

DAVID BLACKWELL

In straight lines Different x - intercepts

Similarities and differences in the graphs of degree 2 polynomials.

PIERRE-SIMON LAPLACE

x is equal to all real number for each polynomial. -Not all positive and the 3 polynomials have a different vertex.

ERNST KUMMER

All of the degree 2 polynomials are parabolas. The functions differ in vertex location and width of the parabola.

MARJORIE RICE

Similarities: They are all parabolas. Differences: They have a different vertex to one another.

JAKOB STEINER

Similaritie: it is a parabola Difference: vertex

GEORG CANTOR

they are all parabola. some are opening up, some are opening down, some have two intersect of x-axis, some have 1, some have nothing. some opening is very big, some are very small.

JULIA ROBINSON

it is all

DIOPHANTUS

All 3 functions are parabolas but one of them is upside-down because of the negative coefficient. They are also in different positions because they have different constants.

FELIX KLEIN

They are all parabolas translated differently, with different vertexes.

MARIA AGNESI

y=ax

MARJORIE SENECHAL

All the functions are parabolas, but all of them have different x and y intercepts (if any) and have either a minimum or maximum. Their vertexes are also different.

JEAN SPRINGER

Similarities: All polynomials are parabolas Differences: y-intercepts are all different

KAREN UHLENBECK

Similarities: The polynomials are all positive. Differences: The vertexes are all different and cross the y-axis in different points.

ADRIAN SCOTT DUANE

one similarity is that they all create parabolas.one difference is that they have different x and y intercepts

HERMANN GRASSMANN

They are all infinite parabolas They have different directions, x-intercepts, y-intercepts, vertex points

RENÉ DESCARTES

They are all parabolas that do not cross the x intercept The y intercept of these parabolas are different

GOTTHOLD EISENSTEIN

They are similar because they are all parabolas. They are different because they all have different y intercepts and cross the x axis on different points.

LIU HUI

Similarities:They are all infinite parabolas. Differences:They have different directions.

AUGUSTIN CAUCHY

They're all parabolas that eventually cross the Y axis. Some of them cross the X axis, some don't.

MICHAEL ATIYAH

They are all infinti parabola crossing the x-axis and once the y-axis. They have different vertex point and intercepts

GOTTLOB FREGE

The degree 2 polynomials are are parabolas. The difference is that they have different vertexes and stretch and shrink differently according to their function.

MINA REES

They are all parabolas but with different vertexes,and y and x intercepts.

GIUSEPPE PEANO

All of the polynomials are parabolas and they all intersect at the same point

ANNIE EASLEY

Each function creates a parabola. Differences are that the parabola expands or compresses and is positive or negative depending on the leading coefficient and its sign.

CATHLEEN MORAWETZ

Similarity: All three have a negative vertex and are parabolas Difference: Two have a vertex of x=0, one has a vertex of x=-1

LENORE BLUM

similarities: they are all parabolas differences: they are facing different directions depending on a has different width depending on the size of b has different y intercepts depending on c

DAVID BLACKWELL

They are all Parabolas Different vertex points

Similarities and differences in the graphs of degree 3 polynomials.

ERNST KUMMER

Each polynomial of degree 3 intersects the y and x axis. They are all tan lines. How they look, in terms of stretch etc. depends on the other terms in the polynomial. The constant term is always the y-intercept.

MARJORIE RICE

Similarities: They all positive. Differences: They have different x-intercepts.

JAKOB STEINER

Similaritie: they have two bumps Difference: x and y intercepts

GEORG CANTOR

they are all curve. but they have different intersect at x-axis. some have 3, some have 2, at less 1

DIOPHANTUS

All the functions curve down and back up but they do so at different rates. The constant is always the y-intercept.

FELIX KLEIN

Polynomial functions with degree 3 each have a wave with one high tide and one low tide. The difference is the heights of the waves.

MARJORIE SENECHAL

All the functions cross both axes, are curved and have a minimum and maximum (relative to nearby coordinates) but vary in the specific intercepts, and whether they're decreasing or increasing.

JEAN SPRINGER

Similarities: They all have curves Differences: They cross the y-axis at different points

KAREN UHLENBECK

Similarities: The polynomials are all positive and cross the x-axis more than once. Differences: They all cross the y-axis at different points.

ADRIAN SCOTT DUANE

one similarity is that they are all curved lines. one difference is that they have different x and y intercepts

HERMANN GRASSMANN

They are all infinite curves and have three x-intercepts They have different directions,

GOTTHOLD EISENSTEIN

All of the lines are curved but they cross the x and y axis at different points.

LIU HUI

Similarities:They all cross y. Differences:y-intercept.

AUGUSTIN CAUCHY

They all cross the X and Y axes. They also all have a sideways S curve, but at different intensities. One of them has a subtle curve, while two of them have very noticeable and large curves.

GOTTLOB FREGE

The degree 3 polynomials have 2 turning points, these lines are also known as tan lines. The differences are that the maximum and minimum vary depending on the functions.

MINA REES

All 3 graphs contains 2 turning points yet the turning points for all 3 graphs vary with different maximum and minimum points. Also, they all have different y and x intercepts.

GIUSEPPE PEANO

The first two cubic functions curves gradually whereas the last function has a very exaggerated curve reflected in the y axis which causes it to curve the opposite way as the first two functions.

ANNIE EASLEY

all the functions created with a degree of 3 make a

CATHLEEN MORAWETZ

Difference: They have different y-intercepts. Similarity: They all have 2 bumps

LENORE BLUM

simil

DAVID BLACKWELL

All the polynomials have bumps One is a parabola Their intercept points are different

Similarities and differences in the graphs of degree 4 polynomials.

ERNST KUMMER

The constant term of each polynomial of degree 4 is its y-intercept. They look like parabolas except with a flat bottom or vertex. One of my polynomials curves before and after it intercept the y axis, it looks similar to a tan line.

MARJORIE RICE

Similarities: They are all the same shape. Differences: They have different vertices.

JAKOB STEINER

Similarity: all of them pass through the y and x axis Difference: slope

GEORG CANTOR

they are all curve. but they opening at different direction with different wide. they have different x-intercept. they have 0,1,2,3or 4 intercept

DIOPHANTUS

All 3 functions looked like regular parabolas but they turned slightly towards the y-axis to reach the y-intercept. The distance from the vertex to the y-intercept would change with different negative numbers.

FELIX KLEIN

The similarities of the graphs is that they all intercept at the y-intercept. They look like a U shape. However, the polynomial with a negative coefficient forces the shape to be reflected. The polynomial with degree 4 and degree 2 makes a W shape because there is a mini parabola inside of it.

MARJORIE SENECHAL

All the functions maintain a similarly wavy shape, with curves being more subtle or prominent than others. They also all have either 2 minimums or 2 maximums and 1 of the other. Not all of them cross the x axis, and they have different intercepts.

JEAN SPRINGER

Similarities: They all curve at one point on the x-axis or y-axis Differences: Not all of them are positive polynomials

KAREN UHLENBECK

Similarities: They all cross the x-axis more than once. Differences:

ADRIAN SCOTT DUANE

one similarity is that they all have a flat vertex. one difference is that they have different x and y intercepts

HERMANN GRASSMANN

They are all irregular curves They have different numbers of x-intercept

GOTTHOLD EISENSTEIN

All have a parabola-like shape but one side of it sticks out more than the other side. They cross both the x and y axis, but at different points. The vertex is different on each one too.

LIU HUI

Similarities:They all cross y, curve. Differences:y-intercept, direction.

AUGUSTIN CAUCHY

They all cross the Y axis, but some of them don't cross the X axis. The lines all appear to have 3 bumps that lead outwards, inwards, and outwards again.

GOTTLOB FREGE

The polynomial function of degree 4 all have 3 turning points. The difference is that some of the turning points are more visible than the others due to the functions. They also have different vertexes and different shapes due to the functions I imputed.

MINA REES

They all consist of 3 turning points, but are at different vertexes and y and x intercepts.

GIUSEPPE PEANO

The three functions are all very steep, however the first and last function are reflected in the x-axis, they are all very close to each other.

CATHLEEN MORAWETZ

Similarity: All have a y-intercept of 0. Difference: Two have 3 bumps while one has one flattened bump

DAVID BLACKWELL

They are all parabolas Different intercept points

Similarities and differences in the graphs of degree 5 polynomials.

ERNST KUMMER

All polynomials intersect the y and x axis. My first polynomial looks like a tan line. The other two functions look very squiggly. Where they intersect the y-axis there is reflection which makes the polynomial look like a cos or sin line until it extends beyond the axis.

MARJORIE RICE

Similarities: They all have the same curve pattern. Differences: They all have different x-intercepts.

JAKOB STEINER

When the leading coefficient of the degree 5 is a negative, it becomes like a parabola but it curves down again. The positive leading coefficients only pass through the x-axis once

GEORG CANTOR

they are all curve, don't have a max or min y. they have different opening direction and different wide and different x-intercept.

DIOPHANTUS

The functions had at least 1 crest and at least 1 trough, but the frequencies were different. They also made a slight curve like in the degree 4 polynomials.

FELIX KLEIN

The graphs all look like the letter N, however the y-intercepts and x-intercepts are different. There is a reflection in the y-axis as the graphs are symmetrical.

MARJORIE SENECHAL

All the functions cross both axes. However, the number of curves (minimum

JEAN SPRINGER

Similarities: They all have multiple curves Differences:

ADRIAN SCOTT DUANE

one similarity is that they are all curved lines. one difference is that they have different x and y inercepts

HERMANN GRASSMANN

They all have one x-intercept and one y-intercept They have four turning points They have different directions

GOTTHOLD EISENSTEIN

All of the functions are curved. Two of the functions cross the x axis 3 times while one of them only cross it once.

LIU HUI

Similarities:They all cross y, curve. Differences:y-intercept, x-intercept.

AUGUSTIN CAUCHY

The lines only appear to have 2 bumps this time. The sideways "S" curves that appear in these graphs are similar to those that from the degree 3 polynomials.

GOTTLOB FREGE

The degree 5 polynomials have 4 turning points and are all shaped in what looks like an 'N' shape. The differences are that they have different vertexes and different x and y intercepts. Some of the turning points aren't as visible due to the coefficients that I entered in the equation.

MINA REES

Although the turning points are not as visible as the other graphs, the graphs of degree 5 polynomials consists of 4 turning points with different vertexes and y and x intercepts. The shapes of the graphs also vary depending on the coefficients inserted in the functions resulting in different sizes of the turning points.

GIUSEPPE PEANO

All three functions are quite different, the first function is a very steep one and it has two small bumps, the second function is also steep and the bumps are steep as well, it is also reflected in the x-axis. The last function has the most number of bumps and it is the widest function out of the three.

CATHLEEN MORAWETZ

Similarity: All have more than one bump Difference: They all have a different number of bumps.

DAVID BLACKWELL

Different intercept points Ends up in a straight line