

Algebra 1 Unit 9: Function Transformations

Universal Essential Question: Why is resilience an influence on success?

Essential Question: How does imbalance require resilience?

Learning Objectives At the completion of this unit, I should ...	Self-Rating, evidence from my INB and practice papers 0 – I have no idea. 1 – I cannot solve problems yet but I am beginning to understand the strategies 2 – I can solve problems but do not yet know why the math works. 3 – I understand why the math works and can solve most problems but still make mistakes. 4 – I understand why the math works and can consistently and accurately solve problems.		
Know – Graphs of the parent functions for: $y = x$; $y = x^2$; $y = x $ – The definition of absolute value – Vocabulary of special linear functions			
Be able to – Identify features of a graph: vertex, line of symmetry, x-intercepts/zeros, maximum/minimum, domain and range – Graph functions by identifying the parent functions and use transformations to graph functions in the form $y = a f(x - h) + k$ – Identify the parent function and transformations and write equations in the form of $y = a f(x - h) + k$ when given a graph – Solve absolute value equations			
Understand – The effect of various variables on the transformations of parent functions (the effect a has on the graph of $y = a f(x)$, the effect h has on the graph of $y = f(x - h)$, the effect k has on the graph of $y = f(x) + k$, the effect -1 has on the graph of $y = -f(x)$) – The connection between a system and the solution to an absolute value equation			

Vocabulary of special linear functions

Transformation

Vertical/Horizontal Translation

Reflection

Parent Function

Vertical/Horizontal Dilation

Absolute Value

Reflection page

Areas of success for this unit and justification	Areas that need more practice and/or deeper understanding, justification, and specific goals to achieve complete mastery
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How does the mathematics we studied in this unit relate to the content and universal essential questions? Be specific by providing evidence from your learning activities for the unit.