

Chapter 1

1. I can create a table and complete graph when given a function.

Khan Academy link - Graphing a basic function

https://www.khanacademy.org/math/algebra/algebra-functions/graphing_functions/v/graphing-a--basic-function

2. I can make a complete description of a function.

Khan Academy link - What is a function?

https://www.khanacademy.org/math/algebra/algebra-functions/relationships_functions/v/what-is-a-function

3. I can determine outputs for any function when given inputs. (reference Order of Ops notes in the Appendix A.1.3)

Khan Academy link - Functions (part 2)

<https://www.khanacademy.org/math/algebra/algebra-functions/classic-function-videos/v/functions-part-2>

4. I can fluidly operate with integers.

Khan Academy link - Adding and subtracting negative numbers

<https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-negative-numbers/cc-7th-add-sub-negatives/v/adding-negative-numbers>

Khan Academy link - Multiplying and dividing negative numbers

<https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-negative-numbers/cc-7th-mult-div-negatives/v/multiplying-positive-and-negative-numbers>

5. I can fluidly operate with fractions.

Adding and subtracting fractions

<https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-fractions-decimals/cc-6th-add-sub-fractions/v/adding-fractions-with-different-signs>

Multiplying and dividing fractions

<https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-fractions-decimals/cc-7th-mult-div-frac/v/multiplying-negative-and-positive-fractions>

Converting fractions to decimals

<https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-fractions-decimals/cc-7th-fracs-to-decimals/v/decimals-and-fractions>

Adding and subtracting rational numbers

<https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-fractions-decimals/cc-7th-add-sub-rational-numbers/v/adding-and-subtracting-a-decimal-percentage-and-fraction>

Story problems with rational numbers

<https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-fractions-decimals/cc-7th-rational-num-word-probs/v/rational-number-word-problem-example-1>

(I can support group tasks by using team roles cooperatively.)

(I can persevere in problem solving.)

Chapter 2

Given a representation of a linear function, I can create the other representations (table, graph, equation and/or situation).

1. I can create a graph given a table, equation or situation.
2. I can create a table given a graph, equation or situation.
3. I can create an equation given a graph, table, or situation.
4. I can create a situation given a graph, table, or equation.

Khan Academy - Linear equation to table to graph *and* situation to equation to table to graph

https://www.khanacademy.org/math/algebra/linear-equations-and-inequalities/graphing_solutions2/v/graphs-of-linear-equations

5. I can find the slope and intercepts of a linear function from multiple representations. (y-intercept is assessed now and x-intercept assessed after Chapt 3)

Learn Zillion - Graphing linear functions using slope and y-intercept

<http://learnzillion.com/lessons/2342-graph-linear-functions-using-the-slope-and-yintercept>
<http://learnzillion.com/lessons/2336-graph-a-line-given-its-slope-and-a-point>

6. I can interpret the slope and y-intercept of a linear function from multiple representations.

Learn Zillion - Interpret line slope of best fit

<http://learnzillion.com/lessons/3299-interpret-the-slope-of-a-line-of-best-fit>

Chapter 3

1. I can simplify expressions with exponents.

Learn Zillion - simplifying expressions with exponents

[http://learnzillion.com/lessons?utf8=%E2%9C%93&filters\[subject\]=math&query=simplifying+expressions+with+exponents](http://learnzillion.com/lessons?utf8=%E2%9C%93&filters[subject]=math&query=simplifying+expressions+with+exponents)

2. I can write the area of composite rectangles as a sum and as a product.
3. I can multiply binomials and polynomials.

LearnZillion - Understanding that polynomials are closed under multiplication; multiplying polynomials

<http://learnzillion.com/lessons/2619-understand-that-polynomials-are-closed-under-multiplication-multiply-polynomials>

Khan Academy - FOIL for multiplying binomials

<https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/multiplying-binomials/v/multiplying-binomials>

4. I can solve simple equations involving multiplication.

Khan Academy - Solving $ax + b = c$

<https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-2-step-equations/v/equations-2>

5. I can solve simple absolute value equations of the form $ax + b = c$.

Khan Academy - Absolute Value Equations

<https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/absolute-value-equations/v/absolute-value-equations>

6. I can rewrite multi-variable equations in terms of one of the variables.

Khan Academy - Rearrange formulas to isolate specific variables

https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/solving_for_variable/v/rearrange-formulas-to-isolate-specific-variables

Khan Academy - Solving for a variable

https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/solving_for_variable/v/solving-for-a-variable

Chapter 4

1. I can write a system of equations to model a situation.

Khan Academy - Tolls, trolls, and systems of equations

<https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-overview/v/tolls--tolls--and-systems-of-equations>

2. I can determine the solution to a systems of equations using multiple strategies. (4 = correct solution, 5 = justification efficiency of method)

Khan Academy links - Solving systems of equations

<https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-with-substitution/v/solving-systems-by-substitution-1>

<https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-elimination/v/addition-elimination-method-1>

3. I can interpret the solution to a systems of equations.

4. I can determine and interpret when systems of equations have infinite or no solutions.

Khan Academy - infinite solutions to systems

<https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-solutions/v/infinite-solutions-to-systems>

Chapter 5

Given a representation of an exponential function, I can create the other representations (table, graph, equation and/or situation).

1. I can create a graph given a table, equation or situation.
 2. I can create a table given a graph, equation or situation.
 3. I can create an equation given a graph, table, or situation.
 4. I can create a situation given a graph, table, or equation.
5. Compare and contrast qualities of different functions.
6. I can write the recursive equations for an arithmetic sequence.
7. I can convert between the recursive and the explicit equation for an arithmetic sequence.

Chapter 6

(As a team we need to determine how much prior statistics will be needed: mean, median mode, range, box and whisker, IQR, outliers, graphs of trend lines)

I can describe the form, direction, strength and outliers of a scatter plot.

I can model a set of data and interpret the meanings of the x-intercept, y-intercept and slope.

I can make predictions by using a “line of best fit”.

LearnZillion - Make predictions using a line of best fit

<http://learnzillion.com/lessons/3154-make-predictions-using-a-line-of-best-fit>

I can create a LSRL (least square residual plot) from a given set of data

I can use a residual plot to analyze the appropriateness of the best fit model

I can find and interpret the meaning of the correlation coefficient.

Chapter 7

I can explain all the parts of the exponential function $y=ab^x$

I can evaluate exponential functions

Given a representation of an exponential function, I can create the other representations (table, graph, equation and/or situation).

5. I can create a graph given a table, equation or situation.
6. I can create a table given a graph, equation or situation.
7. I can create an equation given a graph, table, or situation.
8. I can create a situation given a graph, table, or equation.

Chapter 8

I can completely factor a quadratic expression.

Given a representation of a quadratic function, I can create the other representations (table, graph, equation and/or situation).

9. I can create a graph given a table, equation or situation.
10. I can create a table given a graph, equation or situation.
11. I can create an equation given a graph, table, or situation.
12. I can create a situation given a graph, table, or equation.

I can use the Zero product properties to find the roots of the quadratic

I can determine the x-intercept, y-intercept and vertex of a quadratic

I can write a quadratic in vertex form by completing the square

Chapter 9

I can solve quadratics in variety of ways

I can use the quadratic formula to find the roots of a quadratic

I can justify my process for solving quadratics

I can write, solve and graph one variable inequalities

I can write, solve and graph two variable inequalities.

I can write, solve and graph systems of inequalities.

Appendix

1. I can simplify expressions.

2. I can solve equations.