Course Title: Algebra 2 Part 1

Unit 3 Application Problems

Directions

At the end of each module you will have application problems that will help you apply the skills taught throughout the module. You will only submit your work to these application problems in module 15.

Be sure to save this document where you know how and where to find it. This template is a place for you to show your work and present your solutions. Make sure your work is clear and you show all of your steps that you took to solve the application problem.

You CAN do your work on paper, take an image of your work, and paste that image onto this template.

Module 11 Application Problem #1

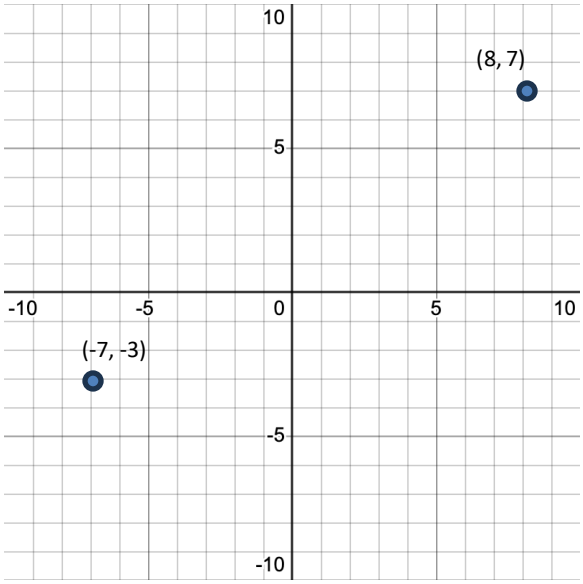
To complete this step, you will want to choose a coordinate pair denoting the location of your treasure on the coordinate graph. You must limit your graph to be contained within a domain and range of negative ten and positive ten.

Coordinate pair for starting point

(-7, -3)

Coordinate pair for ending point

(8, 7)



Course Title: Algebra 2 Part 1

Unit 3 Application Problems

Module 11 Application Problem #2

To complete this step, you will want to decide the document type that you would like to use to create your clues and answer keys. We have provided a template, but you are not required to use it. Because we are working with math equations you will want to choose a program that will allow you to write or draw math equations and show your work. Some programs that allow for this are Word (which has both a math equation editor and a draw option), Google Docs with Google Draw (this combination allows you to use Google Docs and put in equations created in Google Draw), and Powerpoint. These are not all the options but just a few, so use one that you are most comfortable with. We have provided you with a Powerpoint option, but you are welcome to use any software that you may be more comfortable using.

If you are using this template, it is not necessary to do any other documentation. You will only need to submit this form filled out to completion.

Document Type: Powerpoint

Course Title: Algebra 2 Part 1

Module12 Application Problems

Module 12 Application Problem #3

Include in your route a quadratic and square root equation. You do not have to have these in both routes, nor do you have to use them in the same route. Between the two routes, you need to have 1 quadratic equation and 1 square root equation.

Quadratic Equation:

Domain: Range:

Square Root Equation:

Domain: Range:

Paste Desmos link:

Paste in current Desmos image below:

Course Title: Algebra 2 Part 1

Module 12 Application Problems

Module12 Application Problem #4

Include in your route a cubic and cube root equation. You do not have to have these in both routes, nor do you have to use them in the same route. Between the two routes, you need to have 1 cubic equation and 1 cube root equation.

Cube Root Equation:

Domain: Range:

Cubic Equation:

Domain: Range:

Paste Desmos link:

Paste in current Desmos image below:

Course Title: Algebra 2 Part 1

Module 13 Application Problems

Module13 Application Problem #5

Include in your route a logarithmic equation. You do not have to have this in both routes, just one.

Logarithmic Equation:

Domain:

Range:

Paste Desmos link:

Paste in current Desmos image below:

Course Title: Algebra 2 Part 1

Module 13 Application Problems

Module13 Application Problem #6

Include in your route an exponential equation. You do not have to have this in both routes, just one.

Exponential Equation:

Domain:

Range:

Paste Desmos link:

Paste in current Desmos image below:

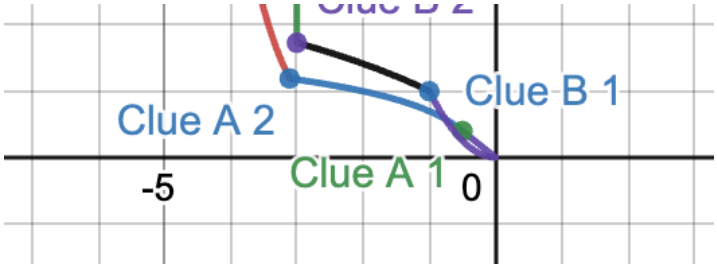
Course Title: Algebra 2 Part 1

Module 14 Application Problems

Module 14 Application Problem #7 & #8

At each point of intersection on the graph, label the coordinate pair as a clue along with A or B depending on the route and a number. See the example image for additional clarification.

For each clue, you should provide two equations (the two equations that are intersecting at the point of the clue). This provides a system of equations. The answer key must show your work solving the system of equations with the answer coming out to the coordinate pair that denotes the point of your clue.



There are tables provided below. You will use a table for each clue. Several tables have been included, if you need more simply duplicate the slide of empty tables until you have the amount of tables you need.

Example		Show your Work
Equation	-.4/.5 x	-.4/.5(x)=log –5x -.8x=log –5x 10^.8x=10^(log –5x) 6.3095^x=-5x X=-.5428 -.4/.5(-.5428)= .4342 (-.5,.4)
Equation	Log -5x	
Clue 1A	(-.5, .4)	

		Show your Work
Equation		
Equation		
Clue		

Course Title: Algebra 2 Part 1

Module 14 Application Problems

Module 14 Application Problem #7 & #8

		Show your Work
Equation		
Equation		
Clue		

		Show your Work
Equation		
Equation		
Clue		

		Show your Work
Equation		
Equation		
Clue		

Course Title: Algebra 2 Part 1

Module 14 Application Problems

Module 14 Application Problem #7 & #8

		Show your Work
Equation		
Equation		
Clue		

		Show your Work
Equation		
Equation		
Clue		

		Show your Work
Equation		
Equation		
Clue		

Course Title: Algebra 2 Part 1

Module 14 Application Problems

Module 14 Application Problem #7 & #8

		Show your Work
Equation		
Equation		
Clue		

		Show your Work
Equation		
Equation		
Clue		

		Show your Work
Equation		
Equation		
Clue		

Course Title: Algebra 2 Part 1

Application Problem Reflection

Idea Design and Refinement

Share how you met the following criteria as you worked to complete these application problems.

1. The student asks thoughtful questions which identify constraints, key benefits, desired functions, and essential features of the desired system. They clearly define the system and how the different parts of the system should interact.
2. The student searches for new ideas and different ways to meet the requirements. They seek many different viewpoints and interpretations to clarify their assumptions. They creatively design an innovative product or model of the system.
3. The student seeks for feedback about the design. They search for changes that will improve the system. They effectively manage their time to get the work completed.
4. The student continuously and effectively refines their ideas and tests assumptions. They actively integrate feedback to improve the design. The end product or model exceeds the system requirements.

In the space provided below be sure to reflect on each of the 4 criteria listed. Additional slides can be used for additional space.

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Application Problem Reflection

Idea Design and Refinement Cont.