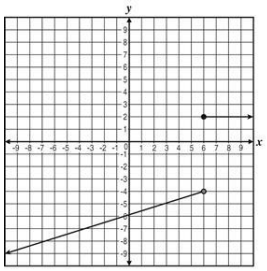
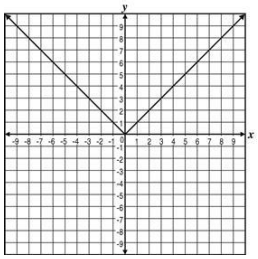
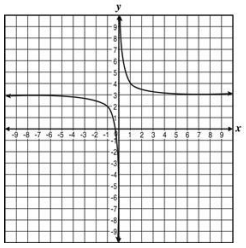
Algebra II Instructional Support

Daily Task: Review class notes related to each unit. Complete the three review questions designated for each day. Show all work on a separate piece of paper.

	Question 1	Question 2	Question 3
Day One: Unit 1	SOL AII.1c What is the factored form of $16m^2 - 24mn^2 + 9n^4$?	SOL AII.3a Given $\lvert x + 1 \rvert \leq 3$, graph the possible values of *x*?	SOL AII.3a Graph the solution of the inequality below. $\lvert -7t - 9 \rvert \leq 12$
Day Two: Unit 2	SOL AII.7a The piecewise function $y = \begin{cases} 2 \text{ if } 1 \leq x < 2 \\ 4 \text{ if } 2 \leq x < 3 \\ 6 \text{ if } 3 \leq x < 4 \end{cases}$ Graph the function and identify the domain and range?	SOL AII.7a What is the range for a function of distance traveled, *d*, for time, *t*? (*d = rt)*	SOL AII.7a Is the graph contunuous between x=0 and x=5? 
Day Three: Unit 3	SOL AII.7a What is the range of $f(x) = 2x^2 + 16x + 37$?	SOL AII.7b A company's profit is described by the formula $P(x) = -5x^2 + 600x + 15,000$ where *x* is the price in dollars that the company charges for its product. What should the company charge for the product to generate the maximum profit, *P*?	SOL AII.7c A ball is tossed up into the air from a height of 50 feet. The height, *h*, of the ball, in feet, is given by the function *h*(*t*) = −16*t*2 + 64*t* + 50, where *t* is the time in seconds. What is the maximum height of the ball, in feet?
Day Four: Unit 3	SOL AII.7k Let $f(x) = x^2 - 2x$ and $g(x) = (1 - x)$. Which of the following expressions is the result of *f*(*g*(*x*))?	SOL AII.7e The discriminant of a quadratic equation is 16. How many real solutions exist to the equation?	SOL AII.7f The graph of $y = \lvert x \rvert$ is shown below.  What is the solution if $x = -7$?
Day Five: Unit 4	SOL AII.7d Find the solutions to $3x^3 + 3x^2 - 12x - 12 = 0$?	SOL AII.7j Which of the following is the inverse of the equation	SOL AII.7g Which function is represented by the graph?

		$y = 8 - \frac{1}{x}$?	
Day Five: Unit 5	SOL AII.2 Which expression is equivalent to $\frac{2+3i}{4+i}$?	SOL AII.3b Which expressions are the solutions to the quadratic equation $8x^2 - 10x = -9$?	SOL AII.3b Find the solutions to the quadratic equation. $x^2 + 12x - 27 = 0$?
Day Six: Unit 5	SOL AII.3c Solve $\frac{1}{2q} + \frac{1}{3q} = 5$ if $q \neq 0$.	SOL AII.3c What is the value of *x* in the equation $\frac{5}{2x+2} = \frac{3}{x+3}$, $x \neq -1$ or $x \neq -3$?	SOL AII.3d If $4\sqrt[3]{x} = 3$, what is the value of *x*?
Day Seven: Unit 6	SOL AII.4 What is the solution to the inequality $\frac{6}{x} > -3$?	SOL AII.4 What are the solutions to the following system of equations? $\begin{cases} y^2 = -x - 4 \\ 0 = -y^2 + x - 1 \end{cases}$	SOL AII.4 What are the values of *x* in the solutions to the following system of equations? $\begin{cases} y + x^2 - 8 = 0 \\ y + x - 7 = 0 \end{cases}$
Day Eight: Unit 7	SOL AII.5 What are the next 2 numbers in the number pattern? 3, 7, 15, 31, . . .	SOL AII.5 In a geometric sequence the ratio of any term divided by the term before it is always the same. $64, 16, 4, 1, \frac{1}{4}, \ldots$ What is the ratio in the geometric sequence shown above?	SOL AII.5 What is the sum of the following infinite geometric series, if it exists? $120 + 60 + 30 + 15 + \ldots$
Day Nine: Unit 7	SOL AII.5 Determine the summation formula for the arithmetic series. $3 + 7 + 11 + 15 + 19 + 23 + 27$	SOL AII.5 What is the missing term in the geometric sequence? $\frac{3}{4}, \frac{1}{2}, \frac{1}{3}, ?, \frac{4}{27}, \frac{8}{81}$	SOL AII.5 The first three terms of an arithmetic sequence are $x - 1$, $3x - 2$, and $5x - 3$. Write an expression which represents the 15th term in the arithmetic sequence?
Day Ten: Unit 8	SOL AII.6b Which graph represents the function $f(x) = -x^3 + 1$?	SOL AII.6a The function $f(x) = \left\| \frac{1}{2}x \right\| + 2$ is symmetric with respect to the *y*-axis. Write the equation *f*(*x*) after it is reflected about the line $y = 2$ to create *g*(*x*)?	SOL AII.6b Write an the equation which represents the image of $y = x^2$ under a 90° clockwise rotation?

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~~Textbook~~