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|  | **Module 1** |
| 1. **A** | Give the domain and range of the function: See sketch |
|  | How would you translate the graph of  to produce the graph of y = -x2 + 7 |
|  | What is the transformation of the graph of  that yields f(x) = 3(x + 2)3 – 4? |
|  | Which is an equation for the inverse of y = 3x – 4? |
|  | State the domain, range and end behavior of the following function  A2_MTXEAR361614_027T |
|  | **Module 2** |
|  | Sketch the parent graph and translate it to obtain a graph y – 5 = |x + 6| |
|  | 4|x+7|+3 = 59 |
|  | -5|x+1| +2 =12 |
|  | Solve 2|x + 15| > 8 |
|  | **Module 3** |
|  | Solve 5x2 - 4 = -8 |
|  | Solve x2 +64 = 0 |
|  | Simplify the expression. (5 + 9i) – (3 – 3i) |
|  | Simplify ( + 3)( – 3) |
|  | Solve x2 + 2x = -2 |
|  | Find the zeros of x2 + 8x + 10 |
|  | Solve x2 + 3x – 10 = 0 |
|  | **Module 5** |
|  | Identify the parent function for (x – 5)4 and describe what transformation of the parent function it represents. |
|  | Sketch: y= -x(x+2)(x-3)(x+5) |
|  | The graph of the polynomial function  is shown. What are the zeros of? |
|  | Write a polynomial equation that could result in the graph shown in #19. |
|  | **Module 6** |
|  | Subtract. (x3 – 4x + 7) – (3x3 – 2x2 + 6x – 4) |
|  | Multiply. (2x+3)(2x2 – 5x+1) |
|  | Expand. (x + 3y)5 |
|  | Completely factor 5x4 – 80. |
|  | When x3 + 64 is written as a product of a binomial and a trinomial, what is the trinomial factor? |
|  | Is (x-3) a factor of |
|  | What is the complete factorization of  10x4 – 5x3 – 30x2 |
|  | Factor |
|  | Divide. (4x2 – 9x + 7)/(x – 3) |
|  | Given f(x) = 2x2 – 5x – 12 and g(x) = 2x + 3,  Find. |
|  | **Module 7** |
|  | What are the possible rational roots of  7x3  - 5x2 + 12x – 3 |
|  | What is the degree of the simplest polynomial with integer coefficients that has, 3i and -5i as zeros? |
|  | Find all the zeros of |
|  | Find all the zeros of |
|  | **Module 8** |
|  | Identify the asymptotes, domain, and range of the function. f(x) =  + 9 |
|  | Identify all asymptotes of f(x) = (x2 + 4x+4)/(x2  - 4) |
|  | Identify holes in the graph of |
|  | Sketch |
|  | **Module 9** |
|  | Simplify |
|  | Simplify |
|  | Simplify |
|  | Simplify |
|  | Simplify |
|  | Simplify |