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| 1. [image] | Domain:\_\_\_\_\_\_\_\_\_\_ Range:\_\_\_\_\_\_\_\_\_\_\_  Zeros:\_\_\_\_\_\_\_\_\_\_\_\_ Y-int:\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Rel. Max:\_\_\_\_\_\_\_\_\_ Rel. Min:\_\_\_\_\_\_\_\_\_\_\_  Abs. Max: \_\_\_\_\_\_\_\_ Abs. Min: \_\_\_\_\_\_\_\_\_\_  Inc:\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dec:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Even, Odd or Neither FUNCTION:\_\_\_\_\_\_\_\_\_\_\_  Least Possible Degree:\_\_\_\_\_\_ |
| 1. Use synthetic substitution to evaluate the given polynomial at the given value. Verify your answer by substituting the value in for x in the polynomial function.   f(x) = x2 – 16x + 34 for x = 5 | 1. Determine the number and type of roots for each equation using one of the given roots. Then find each root. x3 – 7x + 6 = 0; 1 |
| 1. Write the simplest polynomial function with integral coefficients that has the given zeros.   -5, -2, 4 | 1. x3 + 3x2 + 3x + 5 = 0   p = \_\_\_\_\_ factors = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  q = \_\_\_\_\_ factors = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  p/q = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Find the roots of the equations.   x3 – x2 – 34x – 56 = 0 | 1. Find the roots of the equations.   x3 – 2x2 – x + 2 = 0 |
| 1. Solve the system algebraically. Round solutions to the nearest tenth.   f(x) = x2 – 2x + 2  g(x) = -x + 8 | 1. Simplify |
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| 1. It takes Kevin, working at a steady rate, 80 minutes to wax his car. Allison can was the car in 60 minutes. Find how long it would take them to do the job working together. | 1. It takes Ms. Green, working at a steady rate, 20 minutes to mow his front lawn. His nephew Chad can mow the lawn in 15 minutes. Find how long it would take them to do the job working together. |
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| 1. Show that the given function is a rational function. Verify that the rewritten function is a rational function. | 1. Write a rational function of the form  that has the given vertical asymptote(s) and zero(s): vertical asymptotes at x = 1 and x = -2; zero at x = 3 |
| 1. Find the zero(s) of each rational function | Sketch the graph of the given rational function on a coordinate plane. Include asymptotes and zeros, if any. State the end behavior. |
| 1. Find the solution(s) to the rational functions. | 1. For each of the following pairs of functions, find and compare the properties of the functions: |
| 1. For each of the following functions, find the properties of the function: x-intercept or zero, y-intercept, domain, range, asymptote. |