1. **B**  f(1) = 3(1)2 + 4(1) – 7 = 0
2. **E** There is a hole in the function at (-2, 4). Therefore, 4 is not part of the function’s range.
3. **D**
4. **C**
5. **D** For , the possible rational zeroes are . The product of these values is .
6. **C**
7. **B**  therefore
8. **C**  Vertical Asymptote: x = 1; Slant Asymptote: 2 Asymptotes
9. **D**

Because h(x) is an even function, h(x) = h(-x). Therefore, the answer is 4.

1. **E**
2. **A**
3. **C** f(x) = 21x4 + 32x3 – 26x2 – 32x + 5 = (7x – 1)(3x + 5)(x – 1)(x+1)

Sum of roots = Product of roots =

= =

1. **A**
2. **E** (x5 – 3x2 + x + 1)(x – 4) = x4 + 4x3 + 16x2 + 61x + 245 R 981
3. **C**
4. **D** The definition of an even function is f(x) = f(-x). A quadratic is the only example of an even function given.
5. **A**
6. **C** The equation is a sideways parabola and does not pass the vertical line test.
7. **B**  ; ;
8. **B**  Due to the definition of the greatest integer function, only B is not a coordinate on the graph.
9. **C**  ; Intercepts → (0,2) and (-2,0)
10. **D**
11. **A**  =
12. **E** The equation of a parabola can be given by

Substituting the first equation into the other two yields:

Substitute A in to find B:

Substitute in A and B to find

Plug in the values to get the following equation:

1. **D** Fifth term
2. **A**

therefore the domain is

1. **A, B, E**
2. **A**
3. **B**  ;
4. **E** Percent of increase when 456 is increased to x