

**Note:** This review worksheet requires the use of your graphing calculator. Refer to your graphing calculator reference sheet if you need help remembering how to use important features of the calculator!

1. Let  $f(x) = -1.215x^3 + 2.31x^2 + 5.2x + 3.1$  where  $-3 \leq x \leq 3$ .

1a) The function  $f$  has a relative minimum at  $x =$  \_\_\_\_\_.

1b) The function  $f$  has a relative maximum at  $x =$  \_\_\_\_\_.

1c) On what interval(s) is  $f$  increasing? \_\_\_\_\_

1d) On what interval(s) is  $f$  decreasing? \_\_\_\_\_



**Sketch of Graph**

2. Let  $g(x) = 0.645x^4 - 2.67x^2 + 1.34x - 2.91$  where  $-3 \leq x \leq 3$ .

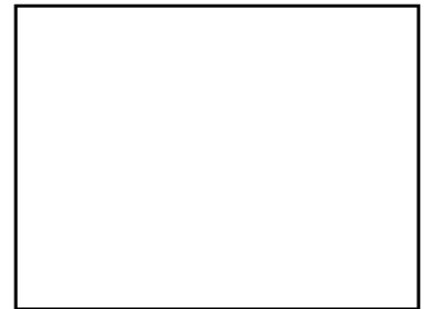
2a) The function  $g$  has a local minimum at  $x =$  \_\_\_\_\_.

2b) The function  $g$  has a local maximum at  $x =$  \_\_\_\_\_.

2c) On what interval(s) is  $g$  increasing? \_\_\_\_\_

2d) On what interval(s) is  $g$  decreasing? \_\_\_\_\_

2e) The graph of  $g$  has zeros at  $x =$  \_\_\_\_\_.



**Sketch of Graph**

3. Let  $h(x) = -0.16x^5 + 1.07x^4 - 2.67x^2 - 1.3x - 3.14$  where  $0 \leq x \leq 6.5$ .

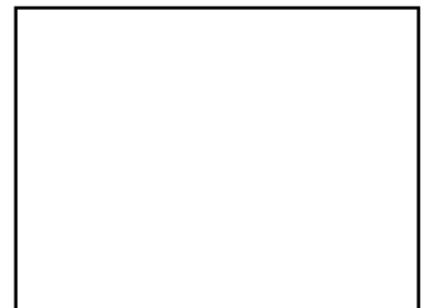
3a) The function  $h$  has a local maximum at  $x =$  \_\_\_\_\_.

3b) The absolute minimum value of  $h$  is \_\_\_\_\_ at  $x =$  \_\_\_\_\_.

3c) On what interval(s) is  $h$  increasing? \_\_\_\_\_

3d) On what interval(s) is  $h$  decreasing? \_\_\_\_\_

3e) The graph of  $h$  has zeros at  $x =$  \_\_\_\_\_.



**Sketch of Graph**