

3.3.27.c This function is increasing from 2 to 3, decreasing from -1 to 1, and constant from -3 to -1 and from 1 to 2.

3.3.33

$$f(-x) = 4(-x)^3 = 4(-x^3) = -4x^3 = -f(x),$$

so f is **odd**.

3.3.47 The absolute maximum is 4, and the absolute minimum is 1.

3.3.63.b

$$g(-1) = (-1)^3 - 2(-1) + 1 = 2;$$

$$g(1) = (1)^3 - 2(1) + 1 = 0;$$

$$\frac{g(1) - g(-1)}{(1) - (-1)} = \frac{0 - 2}{1 + 1} = -1.$$