MTH 30 Homework Section 1.2

Interval notation | set-builder notation

#4 a. $(-1, \infty)$ | $\{x \mid x > -1\}$

open intervals! b. — (none)

c. — (none)

not necessary to use here!

#12 a. — (none)

b. $(-4, 2)$

c. $(-\infty, 4) \cup (2, +\infty)$

or

#14 a. at 0, $f(0) = 2$

b. at -3 and at 3, $f(-3) = -1$, $f(3) = -1$

#20 $g(x) = x^2 - x$

let's find $g(-x)$: $g(-x) = (-x)^2 - (-x) = x^2 + x$

$g(-x) \neq g(x)$ and $g(-x) \neq -g(x)$, hence neither

#22 $h(x) = 2x^2 + x^4$

let's find $h(-x)$: $h(-x) = 2(-x)^2 + (-x)^4 = 2x^2 + x^4$

hence $h(x) = h(-x)$ and function h is even.

#26 $f(x) = 2x^3 - 6x^5$.

let's find $f(-x)$: $f(-x) = 2(-x)^3 - 6(-x)^5 = -2x^3 + 6x^5$

so $f(-x) = -f(x)$ and function $f(x)$ is odd.