MTH30 Homework Section 1.3

(#34) a) domain: $(-\infty, \infty)$ - look for x-values

b) range: $(-\infty, 4)$ - look at y-values

c) x-intercepts (on x-axis): $(-4,0), (4,0)$

d) y-intercept (on y-axis): $(0,1)$

e) f is increasing (f increases as x increases): $(-\infty, 2)$ or $\cup$ $(0,3)$

f) f is decreasing (f decreases as x increases): $(-2,0) \cup (3,\infty)$ or $(-\infty,-4] \cup [4,\infty)$

g) $f(x) \leq 0$ for x from $(-\infty,-4] \cup [4,\infty)$

h) relative maximum at -2 and at 3: $f(-2)=4$, $f(3)=2$

i) see h): 2 and 4

j) $f(-2) = 4$

k) $x = -4, 4$

l) not even (not symmetric with respect to y-axis)
not odd (not symmetric with respect to the origin)
Hence neither.