

MHF 4U Quiz 2.1-2.4

$$\frac{\quad}{20+2} = \frac{\quad}{22}$$

Name _____

1. Given $f(x) = \frac{2x}{5x+3}$ find: [3]

- a) vertical asymptote(s): _____
 c) hole: _____
 e) y-intercept: _____

- b) horizontal asymptote: _____
 d) x-intercept(s): _____
 f) oblique asymptote: _____

2. Given $h(x) = \frac{3x^2 - 2}{x - 1}$ find: [3]

- a) vertical asymptote(s): _____
 c) hole: _____
 e) y-intercept: _____

- b) horizontal asymptote: _____
 d) x-intercept(s): _____
 f) oblique asymptote: _____

3. Divide the following polynomial [3]
 $(x^4 - 3x^3 - x^2 + 6x - 2) \div (x^2 - 3x + 1)$

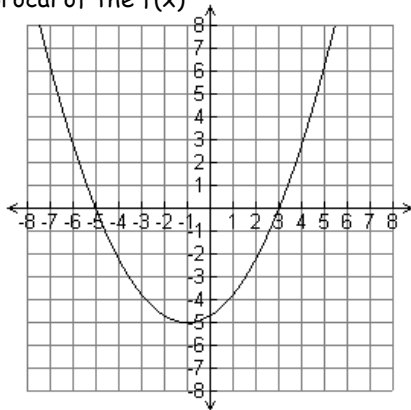
4. Factor fully [3,2]

a) $x^3 + 2x^2 - 5x - 6$

b) $\frac{8x^3}{125} - 1$

5. Sketch the graph for the following function. Show all steps for b). [2,4]

a) the reciprocal of the f(x)



b) $g(x) = \frac{x+1}{x^2 - x - 2}$

