MAC1140 SEC29 Quiz 09-14-2007 3.7

5/10

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Full Name: Sec#: Date:

1.

[3.7.2aPT]Select the choice having ALL the vertical asymptotes of the function $f(x) = \frac{6}{(x-3)(x+2)}$

- ○ $x = 3, x = -2, x = 0$
- ○ $y = 3x, y = -2x$
- ○ $x = -3, x = 2$
- ○ $(3, 0), (-2, 0)$
- ○ $y = 3, y = -2$
- ● $x = 3, x = -2$

HW?

steps for quiz?
The median for this quiz is 10/10.

2.

[3.7.2bPT]Select the choice having ALL the horizontal asymptotes of $f(x) = \frac{x^4+2}{x^4+1}$

- ○ $y = 1, y = -1$
- ○ No horizontal asymptotes
- ○ $y = -1$
- ● $y = 1$
- ○ $y = 2$
- ○ $x = 0$

$f = \frac{x^4+2}{x^4+1}$ ← degree 4 / ← degree 4.

So the H.A. is the ratio of leading coef.

$y = \frac{1}{1} = 1$

3.

[3.7.3aPT]Find the oblique asymptote of $f(x) = \frac{3x^2}{x+2}$

- ● $y = 3x + 6$
- ◉ $y = 3x - 6$

L.D:

$$x+2 \;\big|\; 3x^2+0x+0$$

$3x - 6$ ← quotient is the O.A.

$(-)\ 3x^2+6x$

$-6x+0$

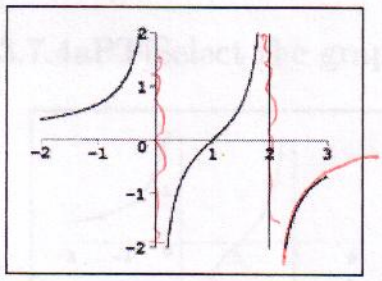
$(-)\ -6x-12$

12

- No oblique asymptote
- $y = 3x + 2$

4.

[3.7.4bPT]Select the equation of the following graph.



1. Zeros of bottom: 2, 0.
2. $f(3) > 0$
3. Only the second satisfy.

- $y = -\frac{x+1}{x(x+2)}$
- $y = \frac{1-x}{x(x-2)}$
- $y = \frac{x-1}{x(x-2)}$
- $y = \frac{x+1}{x(x+2)}$