## Hieu Pham

## Assignment Section\_4.4 due 05/01/2014 at 11:58pm MST

	• 0
1. (1 pt) Suppose that	<ul><li>→ -3,3</li></ul>
6	• 1
$f(x) = \frac{6}{x^2 - 9}.$	(correct)
x 9	Correct Answers:
(A) List all critical numbers of $f$ . If there are no critical num	• 0
(A) List all critical numbers of $f$ . If there are no critical numbers of $f$ .	• (-infinity,-3) U (-3,0)
bers, enter 'NONE'.	• (0,3) U (3,infinity)
Critical numbers =	• 0
(B) Use interval notation to indicate where $f(x)$ is increas-	• NONE
ing.	• (-infinity,-3) U (3,infinity)
<b>Note:</b> Use 'INF' for $\infty$ , '-INF' for $-\infty$ , and use 'U' for the	• (-3,3)
union symbol.	• NONE
	• 0
Increasing:	• -3, 3
(C) Use interval notation to indicate where $f(x)$ is decreas-	• 1
ing.	
Decreasing:	<b>2.</b> (1 pt) Suppose that
(D)List the x-coordinates of all local maxima of $f$ . If there	$f(x) = 8x - 3\ln(x),  x > 0.$
are no local maxima, enter 'NONE'.	$f(v) = Sv = S \ln(v),  v > 0.$
x values of local maxima =	
(E) List the x-coordinates of all local minima of $f$ . If there are no local minima enter 'NONE'	(A) List all critical numbers of $f$ . If there are no critical val-
are no local minima, enter 'NONE'.	ues, enter 'NONE'.
x values of local minima =	Critical numbers =
(F) Use interval notation to indicate where $f(x)$ is concave	(B) Use interval notation to indicate where $f(x)$ is increas-
up.	ing.
Concave up:	<b>Note:</b> Use 'INF' for $\infty$ , '-INF' for $-\infty$ , and use 'U' for the
(G) Use interval notation to indicate where $f(x)$ is concave	union symbol.
down.	
Concave down:	Increasing:
(H) List the $x$ values all inflection points of $f$ . If there are no	(C) Use interval notation to indicate where $f(x)$ is decreas-
inflection points, enter 'NONE'.	
Inflection points =	ing.
(I) List all horizontal asymptotes of $f$ . If there are no hori-	Decreasing:
zontal asymptotes, enter 'NONE'.	(D) List the x-coordinates of all local maxima of $f$ . If there
Horizontal asymptotes $y = \underline{\hspace{1cm}}$	are no local maxima, enter 'NONE'.
(J) List all vertical asymptotes of $f$ . If there are no vertical	x values of local maxima =
asymptotes, enter 'NONE'.	(E) List the $x$ -coordinates of all local minima of $f$ . If there
Vertical asymptotes $x = \underline{\hspace{1cm}}$	are no local minima, enter 'NONE'.
(K) Use all of the preceding information to sketch a graph of	x values of local minima =
	(F) Use interval notation to indicate where $f(x)$ is concave
f. When you're finished, enter a "1" in the box below.	up.
Graph Complete:	Concave up:
Answer(s) submitted:	(G) List the $x$ values of all inflection points of $f$ . If there are
• 0	no inflection points, enter 'NONE'.
• (-INF,-3) U (-3, 0)	x values of inflection points =
• (0,3) U (3, INF)	(H) Use all of the preceding information to sketch a graph of
• 0	f. When you're finished, enter a "1" in the box below.
• NONE	j non jou to initioned, onto a 1 in the box below.
• (-INF, -3) U (3, INF)	Graph Complete:
• (-3,3) • NONE	Answer(s) submitted:
• NONE	monet (s) suonimea.

• 3/8
• (3/8, INF)
• (0,3/8)
• NONE
• 3/8
• (0,inf)
• NONE
• 1
(correct)
Correct Answers:
• 0.375
• (0.375, infinity)
<ul><li>(0,0.375)</li></ul>
• NONE
<ul><li>0.375</li></ul>
• (0,infinity)
• NONE
• 1
3. (1 pt) Suppose that
$f(x) = 3x^6 - 7x^5$ .
J ( )
(A) Find all aritical numbers of f. If there are no aritical num
(A) Find all critical numbers of $f$ . If there are no critical numbers, enter 'NONE'.
Critical numbers =
(B) Use interval notation to indicate where $f(x)$ is increasing
ing. <b>Note:</b> Use 'INF' for $\infty$ , '-INF' for $-\infty$ , and use 'U' for the
union symbol.
Increasing:
(C) Use interval notation to indicate where $f(x)$ is decreas-

Decreasing: \_ (D) Find the x-coordinates of all local maxima of f. If there are no local maxima, enter 'NONE'.

x values of local maxima = \_

(E) Find the x-coordinates of all local minima of f. Note: If there are no local minima, enter 'NONE'.

x values of local minima = \_

(F) Use interval notation to indicate where f(x) is concave up.

Concave up: \_\_\_

ing.

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(G) Use interval notation to indicate where $f(x)$ is concave
down.
Concave down:
(H) List the $x$ values of all inflection points of $f$ . If there are
no inflection points, enter 'NONE'.
x values of inflection points =
(I) Find all horizontal asymptotes of $f$ . If there are no hori-
zontal asymptotes, enter 'NONE'.
Horizontal asymptotes $y = \underline{\hspace{1cm}}$
(J) Find all vertical asymptotes of $f$ . If there are no vertical
asymptotes, enter 'NONE'.
Vertical asymptotes $x = \underline{\hspace{1cm}}$
(K) Use all of the preceding information to sketch a graph of
f. When you're finished, enter a "1" in the box below.
Graph Complete:
Answer(s) submitted:
• 0, (35/18)
• (35/18, INF)
• (-INF, 35/18)
• NONE
• 35/18
• (-INF,0) U ((14/9),INF)
• (0,(14/9))
• 0, (14/9)
• NONE
• NONE
• 1
(correct)
Correct Answers:
• 0, 1.9444444444444
• (1.9444444444444, infinity)
• (-infinity,1.9444444444444)
<ul><li>NONE</li><li>1.9444444444444</li></ul>
<ul><li>(-infinity,0) U (1.5555555555556,infinity)</li><li>(0,1.55555555555556)</li></ul>
- (0/ ± • 000000000000000000000000000000000

NONE • NONE

0, 1.5555555555556

• 1