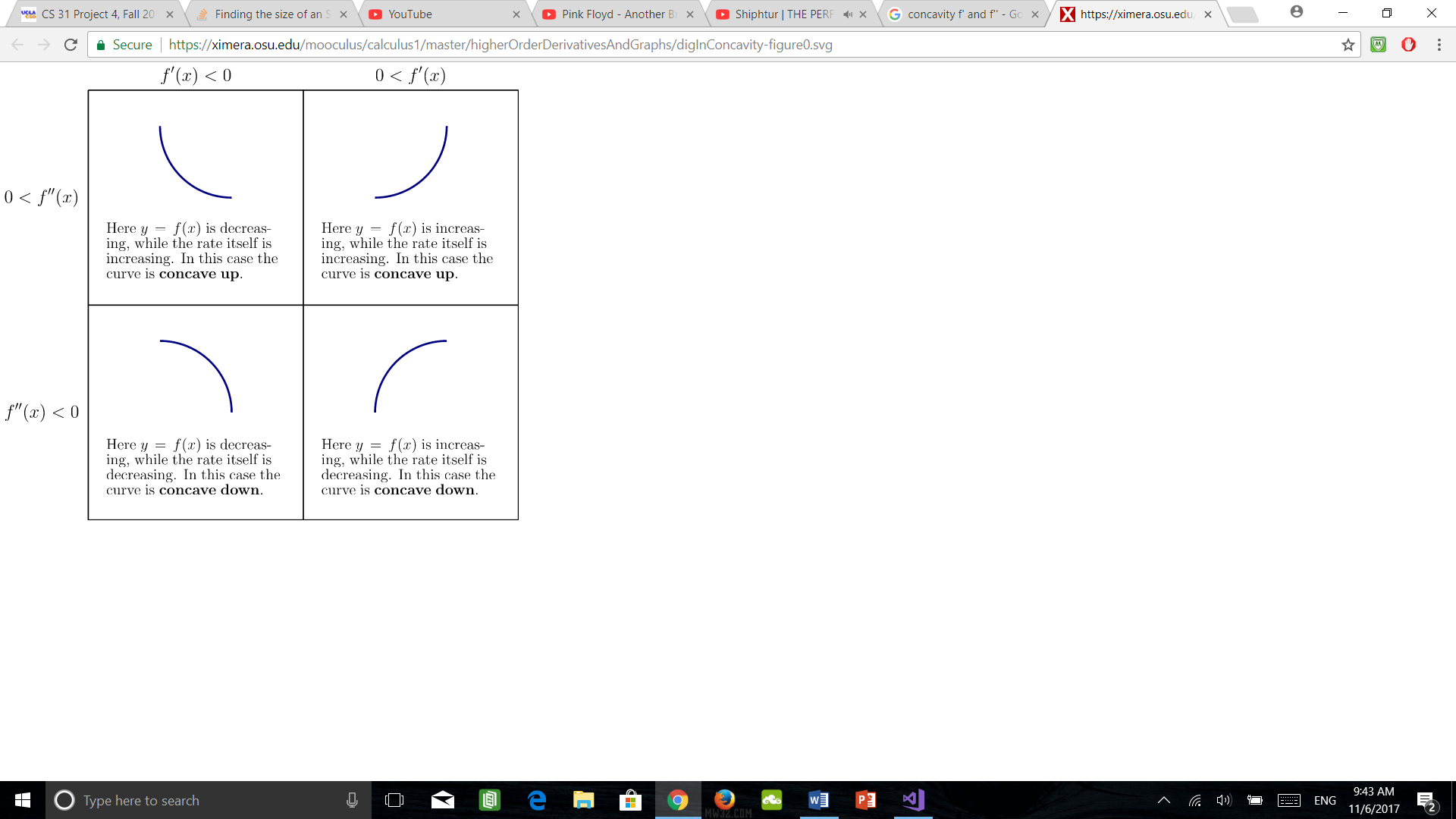
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11/6/2017

Math 31A Lecture Notes: Graphing



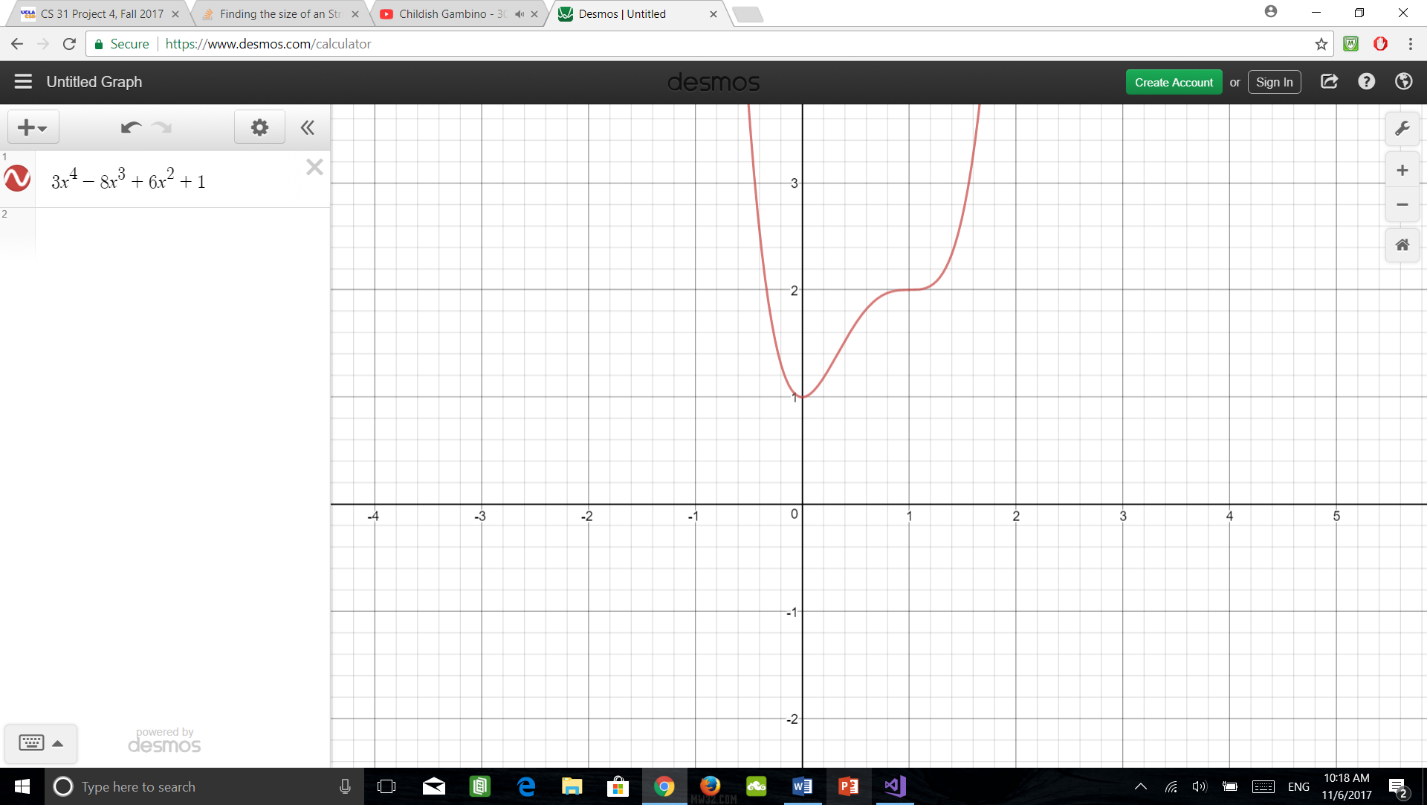
Example 1: Sketch

Step 1: Determine the signs of and

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Interval | Test values | Sign of | Interval | Test values | Sign of |
|  |  | - |  |  | + |
|  |  | + |  |  | - |
|  |  | + |  |  | + |

Step 2: Note transition points and sign combinations

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  | |  |



: local max

: point of inflection

: point of inflection

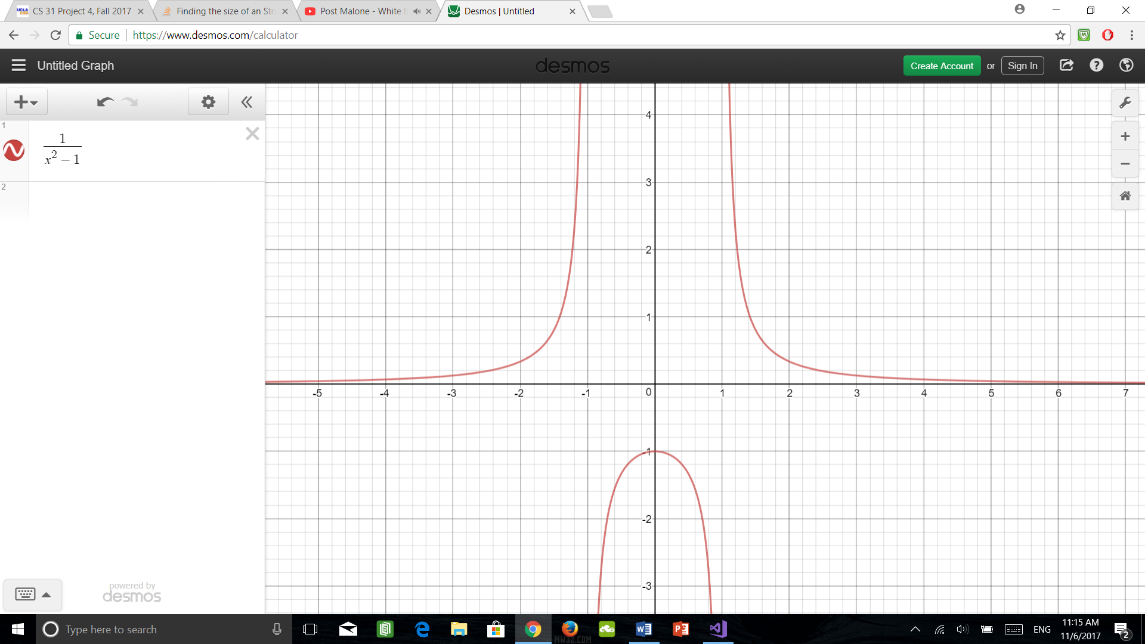
Step 3: Figure out leading term

Example 2: Sketch graph of

Step 0: Determine domain of the function

is not defined for ,

Analyze on separately

Step 1:

For , the denominator of is positive

is a local max

for or

for

Step 2: Note transition points and sign combinations

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  | |  |

Step 3: Asymptotic behavior