Closing today: 4.4 (L'Hopital's rule)
Closing Mon: 4.4-5 (graphing)
Closing next Wed: 4.7 (applied max)
Final Exam, Saturday, March 11
1:30-4:20pm, Kane 130
(email me if you want a left-hand seat)

**Entry Task:**

Evaluate

1. $\lim_{x \to 0^+} 6x + 7 + x\, \mathrm{e}^{1/\mathrm{x}}$

*Hint*: Rewrite $x\, \mathrm{e}^{1/\mathrm{x}}$ as a fraction.

2. $\lim_{x \to \infty} \left(1 + \frac{2}{x}\right)^x$

*Hint*: Start by writing

$L = \lim_{x \to \infty} \left(1 + \frac{2}{x}\right)^x$, then take the natural log of both sides.

## 4.5 Curve Sketching

1. Sketch the graph of

$$f(x) = x^4 - 2x^2$$

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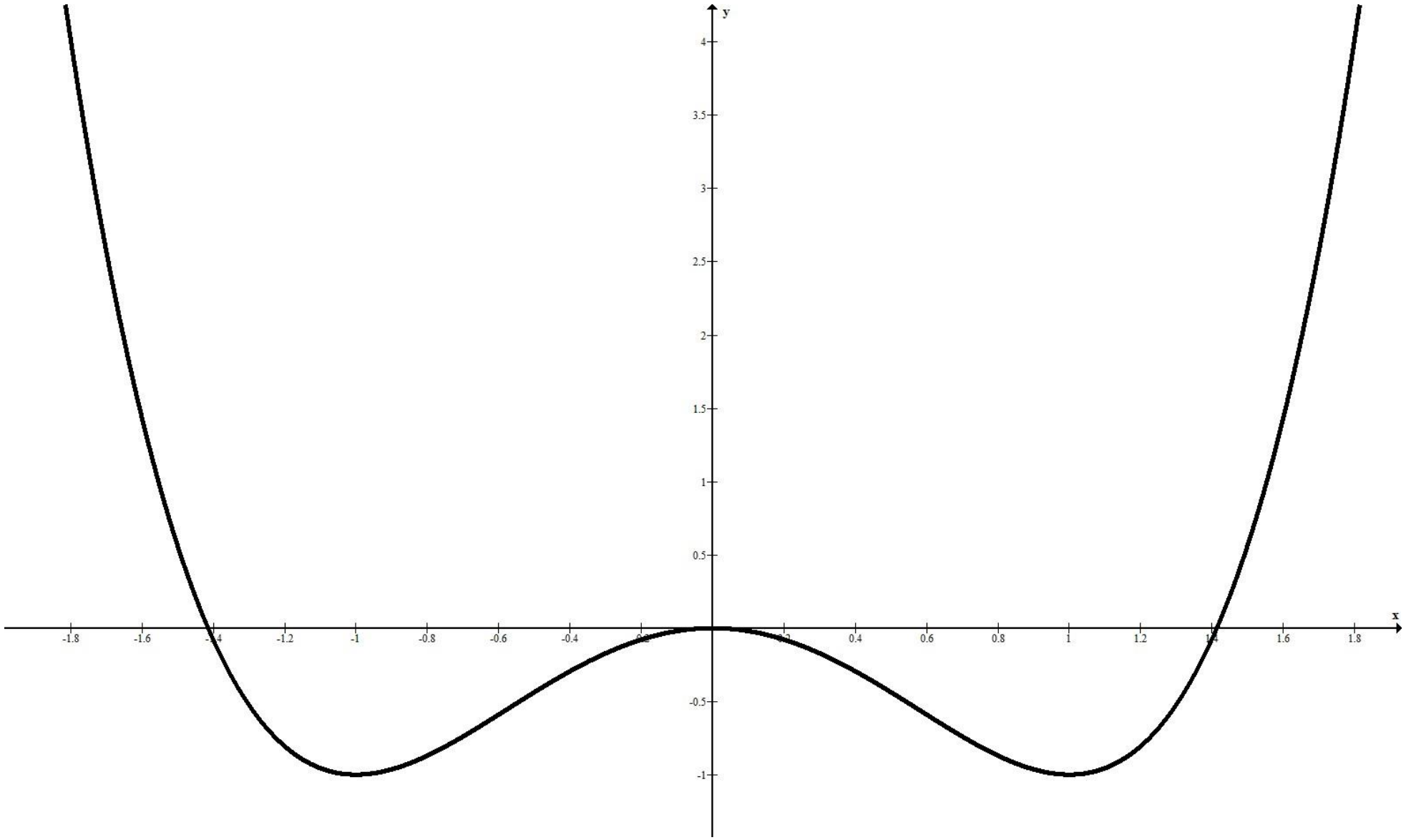

2. Sketch the graph of

$$f(x) = \frac{e^x}{x}$$

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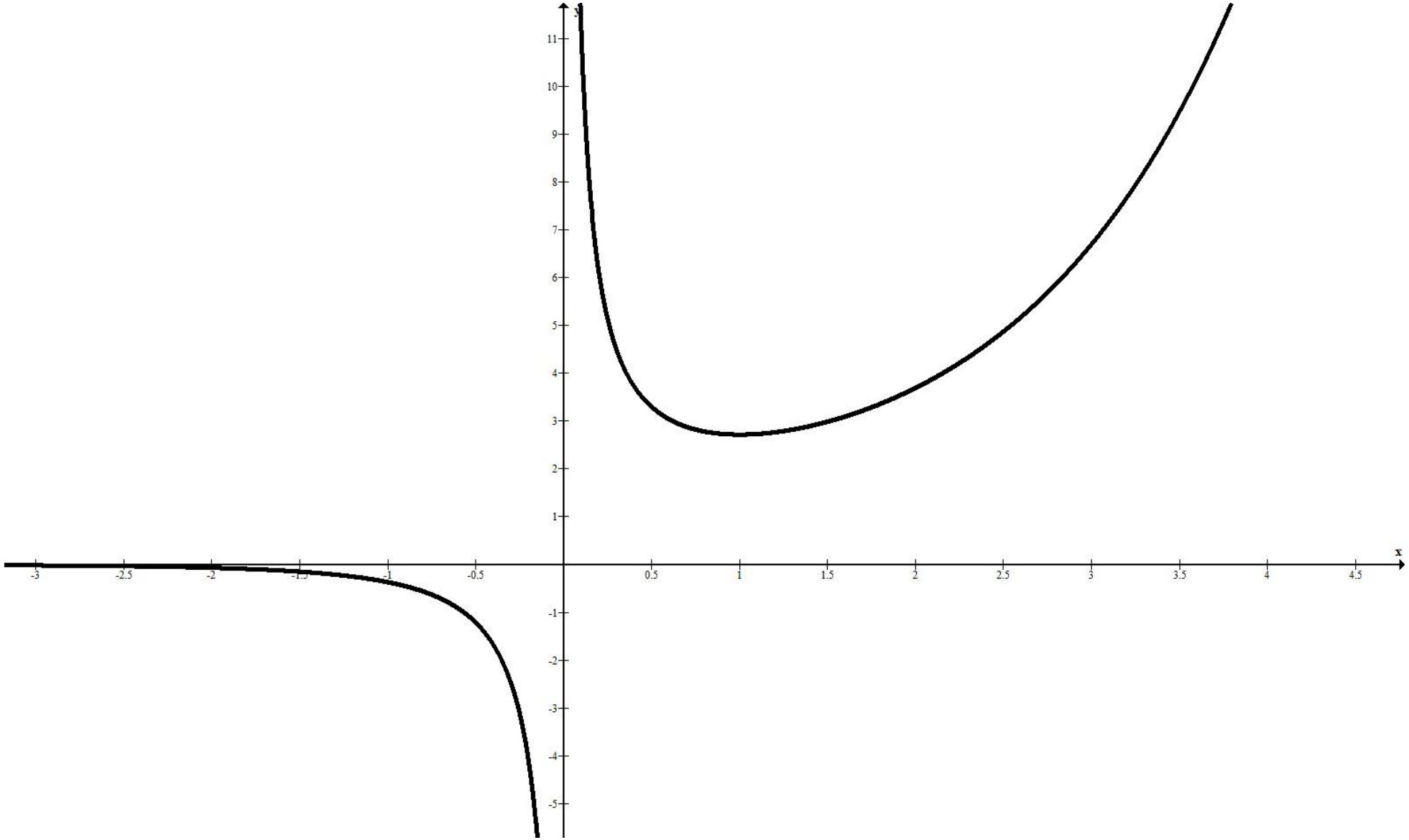

3. Sketch the graph of

$$f(x) = x^{\frac{1}{3}}(x^2 - 7)$$

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