**Q1 Info**  
Q1 for 10am class: Q1: Thursday Sept 7. Covers limit types and removable discontinuities

**Asymptote 2.6 Page 140**  
3, 15, 17, 19, 21, 23, 29, 41, 43,

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3, 15, 17, 19, 21, 23, 31, 47, 49,

**Q2 Practice Asymptotes**

1) For the functions $f$ below,
   i) Find all vertical asymptotes.
   ii) Find a $g(x)$ to which $f(x)$ is asymptotic.
   iii) Compute the limit to show $f$ and $g$ are asymptotic.

   a) $f(x) = \frac{x^4}{x^2 - 3x + 2}$  
   b) $f(x) = \frac{x^4 - x^2 - 1}{x^3 + 3x}$

2) Find any horizontal asymptotes. If there are none, find a $g(x)$ to which $f$ is asymptotic. Show $f$ is asymptotic to $g$ by computing a limit.

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

3) Find any horizontal asymptotes. If there are none, find a $g(x)$ to which $f$ is asymptotic.

   a) $\frac{x^2 + \sqrt{x} - 6}{x^2 - 4x + 4}$  
   b) $\frac{x^3 - x - 1}{x^2 + 3}$  
   c) $\frac{x^4 + x^2 - 1}{x^2 - x - 1}$