

[17-09-14-T11]

When I say “graph”, I mean that you should go at it analytically as in class today. After you are convinced you have the correct graph, you might find it interesting to compare your graph to that produced by a machine.

1. In class, Jadie wondered if f a function of x will always exhibit asymptotic behavior near any x for which f is undefined. Graphing the function

$$f : f(x) = \frac{x^2 + 5x + 6}{x + 3}$$

may help you form an opinion. (There is a hint on the back of this page, if you want it).

2. Graph the function

$$f(x) = x^2 + \frac{1}{x}.$$

3. On the same set of axes, graph the functions

$$f(x) = x^4. \text{ and } g(x) = x^8.$$

Be sure to find the points where f and g intersect and show the correct relationship of f and g .

Hint for question 1. $x^2 + 5x + 6$ factors.