1.

$$F(x) = x\sqrt{6 - x}$$

(a) What is the domain of $F(x)$?

(b) Find the intervals of increase or decrease and critical numbers.

(c) Find the intervals of concavity and the inflection points.

(d) Sketch the graph.

2.

$$f(t) = t^{4/5}(t - 4)^2$$

(a) What is the domain of $f(t)$?

(b) Find $f'(t)$. What is its domain?

(c) Find all the critical numbers.

3.

$$g(x) = \frac{e^x}{1 - e^x}$$

(a) What is the domain of $g(x)$?

(b) Find the horizontal and vertical asymptotes.   ←— *§4.4 helps with this kind of limit*
                                                         . . . you can do it anyway!

(c) Find the intervals of increase or decrease and critical numbers.

(d) Find the intervals of concavity and the inflection points.

(e) Sketch the graph.