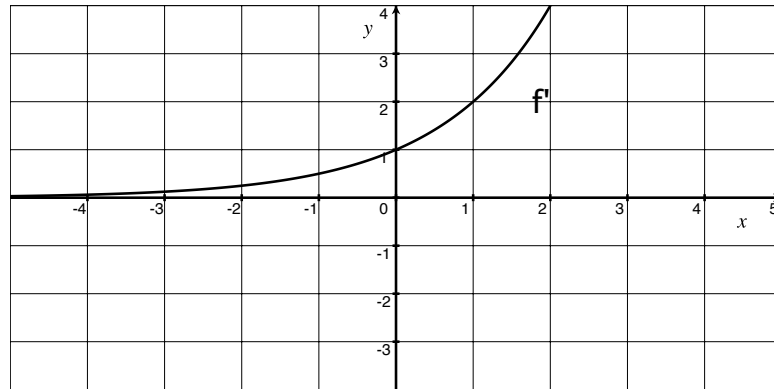


Quiz 2

TQS 211

Show *all* your work (algebraically or geometrically) for each and simplify. No credit is given without supporting work.

1. (§2.1#3) The size f , of a tumor (in cubic millimeters) is given by $f(t) = 2^t$, where t is the number of months since the tumor was discovered. *Include units in your answers!!!*

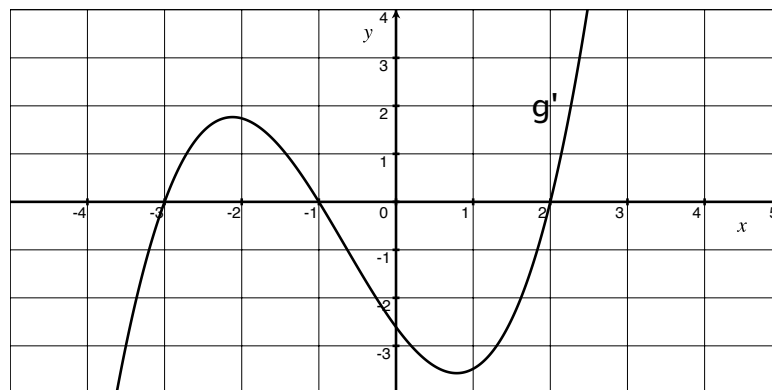


- (a) [2] What is the total change in the size of tumor during the first 2 months?

- (b) [3] Carefully explain what $f'(1)$ is in terms of tumor sizes and months.

- (c) [2] Approximate $f'(1)$ either graphically or numerically.

2. Let g be a function whose derivative is shown below. (Thus the following is a graph of g')



- (a) (§2.2#29a) [2] Is g increasing when $x = -2$? Why or why not?

- (b) (WebHW 3 #7) [1] Is g'' positive or negative at $x = 0$?