

### Quiz Three

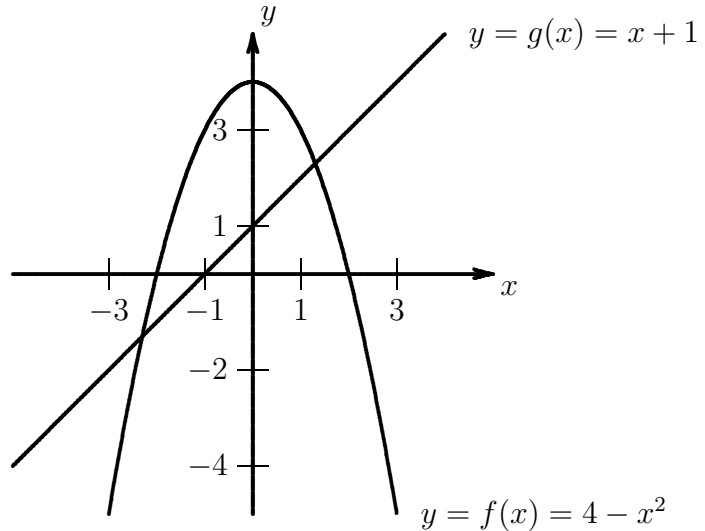
		Truman	Kelly	Hui
Section	12:30	AB	AD	
(circle one)	1:30	AA	AC	AE

No notes. No calculators.

Simplify your answers. Show your work. Please put a box around YOUR FINAL ANSWER. There are 15 points on this quiz.

For this page, consider the functions  $y = f(x) = 4 - x^2$  and  $y = g(x) = x + 1$ , graphed to the right.

- 1 (3 points) Find all values of  $x$  for which  $\frac{f(x)}{g(x)} = 4$ .



- 2 (4 points) Find an inverse function  $y = f^{-1}(x)$ , and specify the domain and range for your function. (Note: the function  $y = f(x)$  is not one-to-one, so you will have to restrict the domain of  $f(x)$  before finding an inverse. Use the largest domain you can.)

For the problems on this page, consider the function

$$h(x) = \frac{2x - 6}{x - 1}.$$

3 (3 points) Find the zeros and all asymptotes of  $h(x)$ .

4 (5 points) Graph the function  $y = h(x)$  on the axes, below. Clearly label at least four points on your graph, including all points where the curve crosses either axis. Be sure to show, and label, all asymptotes.

