

Name:

Homework: IB Differential calculus exam problems

$$1. \underbrace{\overbrace{a+b+c}^6 \cdot \overbrace{d+e+f}^7}_{\text{meaning of life}} = 42$$

2. The values for $f(x)$, $g(x)$, and their derivatives when $x = 2$ and $x = 5$ are given in the table.

x	$f(x)$	$f'(x)$	$g(x)$	$g'(x)$
2	3	2	5	-2
5	-1	4	2	3

Let $h(x) = f(x)g(x)$

- (a) Find $h(2)$.
- (b) Find $h'(5)$.
3. A farmer wishes to create a rectangular enclosure, ABCD, of area 525 m^2 , as shown below.

Figure 1: Farmer's field



4. Graph

