Question 1 (7 marks)

Find $\frac{\mathrm{d}y}{\mathrm{d}x}$ for each of the following. There is no need to simplify your answers.

(a)
$$y = e^{x^2}$$
.



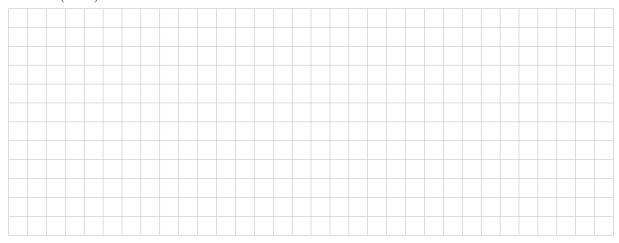
(2 marks)

(b) $y = 2x \sin 3x$.



(2 marks)

(c)
$$y = \frac{4x}{(6-x)^2}$$
.



(3 marks)