2. **In this question you must show all stages of your working.**
Solutions relying on calculator technology are not acceptable.

A curve has equation

$$y = x(x + 3)(x - 2)$$

(a) Find, in simplest form, $\frac{dy}{dx}$

(3)

(b) Hence find the range of values for x such that

$$\frac{dy}{dx} \geqslant 2$$

(4)

(Total for Question 2 is 7 marks)

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3. **In this question you must show all stages of your working.**
Solutions relying on calculator technology are not acceptable.

Solve the equation

$$2y^2 + 1 = \frac{15}{y^2}$$

(5)

(Total for Question 3 is 5 marks)