

The polynomial  $ax^3 + x^2 + bx + 3$  is denoted by  $p(x)$ . It is given that  $p(x)$  is divisible by  $(2x - 1)$  and that when  $p(x)$  is divided by  $(x + 2)$  the remainder is 5.

Find the values of  $a$  and  $b$ .

[5]

This image shows a full page of white paper with horizontal dotted lines, typical of primary school writing paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.