Factor out the GCF: 1)
$$90x^{6}y^{5} - 144x^{5}y^{4} + 54x^{4}y^{3} - 36x^{3}y^{2}$$

Rewrite each of the following expressions as the product of two binomials by factoring out a common binomial factor.

2) (2x-9)(5x+7) - (2x-9)(8x-1)3) 9x(3x-10) - 5(3x-10)

4) The area of a rectangle is represented by the polynomial $48x^2 - 80x$. The width of the rectangle is given by the binomial 3x - 5.

(a) Find a monomial expression in terms of x for the length of the rectangle. Show how you arrived at your answer.

(b) If the length of the rectangle is 112, what is the width of the rectangle?

Factor Completely:

5) 9x² – 196

6) $6x^{10} + 6x^9 - 540x^8$

7) 9x² – 81

8) $24x^2 + 2x - 5$