

CHAPTER 14

MORE FACTORIZATIONS AND ROOTS OF POLYNOMIALS

Homework

- Factor using Viète's formulas the following second degree polynomials and state which are the roots (when the coefficient of the quadratic term is not one (and not zero) you can divide by it):
 - $x^2 - x - 20$
 - $x^2 + 9x + 18$
 - $3x^2 + 15x + 18$
 - $-x^2 + 2x + 3$
 - $2x^2 + 12x - 14$
- Factor the following polynomials and find all their roots:
 - $x^2 - 4$
 - $25 - x^2$
 - $x^4 - 16$
 - $x^2 - 2x + 1$
 - $x^4 - 2x^2 + 1$
 - $4x^2 + 12x + 9$
 - $x^2 - 2x - 3$
- Find $p + q$ given that $(q + 4)(p + 3) - (q + 2)(p + 1) = 44$.
- If $(ax + b)(2x + 3) = 20x^2 + 44x + 21$, where a and b are two distinct integers, what is the value of the sum $a + b$?