

# MATH 0372 – POLYNOMIALS – FACTORING I

**Instructions:** Factor each of the following completely.

1.  $-x^3y^2 - x^2y^3 - x^2y^2$

2.  $7x^4y^3z^2 - 21x^2y^2z^2 - 14xy^2z^3$

3.  $2x^2(x+5) + 7x(x+5) + 6(x+5)$

4.  $5xy^2 + 5y^2 + 3ax + 3a$

5.  $x^3 + 4x^2 - 9x - 36$

6.  $9x^3 + 18x^2 - 4x - 8$

7.  $x^2 - x - 12$

8.  $15 - 2x - x^2$

9.  $x^2 - 12xb + 36b^2$

10.  $2a^5 + 6a^4b + 4a^3b^2$

11.  $6x^4y^2 + 18x^3y^2 - 24x^2y^4$

12.  $3x^{2n} - 21x^n + 30$

## MATH 0372 – POLYNOMIALS – FACTORING I

1. $-x^2y^2(x+y+1)$	2. $7xy^2z^2(x^3y-3x-2z)$	3. $(x+5)(x+2)(2x+2)$
4. $(x+1)(5y^2+3a)$	5. $(x+3)(x-3)(x+4)$	6. $(3x+2)(3x-2)(x+2)$
7. $(x-4)(x+3)$	8. $(-x-5)(x-3)$	9. $x(x-12b(1-3b))$
10. $2a^3(a+2b)(a+b)$	11. $6x^2y^2(x^2+3x-4y^2)$	12. $3(x^n-2)(x^n-5)$

