

Factoring Puzzle Review of GCF, 2 terms, 3 terms, 4 terms Name: \_\_\_\_\_  
Factor completely. Show all work on your own paper. Then decode the message.

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|---|--|
| _____ 1. $x^3 + 8$                                | A. Prime                                       |
| _____ 2. $3x^6 - 3$                               | C. $(x + 8)(x - 9)$                            |
| _____ 3. $4x^3 - 20x^2 + 24x$                     | E. $(x - y)(x + 3)$                            |
| _____ 4. $6x^2 - x - 2$                           | F. $(x + 7)(x - 2)(x + 2)$                     |
| _____ 5. $x^4(x^2 + 5x - 14) - 16(x^2 + 5x - 14)$ | G. $(5x - 1)(x - 1)$                           |
| _____ 6. $x^2 + 3x - xy - 3y$                     | I. $2x(3x^2y + 1)(9x^4y^2 - 3x^2y + 1)$        |
| _____ 7. $x^4 - x^2y - 6y^2$                      | I. $(x + 4)(x + 7)$                            |
| _____ 8. $x^2 + 7x - 18$                          | N. $(x^3 + 2)(x - 1)(x^2 + x + 1)$             |
| _____ 9. $x^2 + 11x + 28$                         | N. $4x(x - 3)(x - 2)$                          |
| _____ 10. $2x^2 - 18$                             | N. $2(x - 3)(x + 3)$                           |
| _____ 11. $x(x^2 - 4) + 7(x^2 - 4)$               | O. $2(x - 2)(x - 5)$                           |
| _____ 12. $x^2 + 16$                              | P. $(x^2 + 4)(x - 2)^2(x + 2)(x + 7)$          |
| _____ 13. $x^2 - x - 72$                          | R. $(x^2 + 2y)(x^2 - 3y)$                      |
| _____ 14. $2x^2 + 28x + 98$                       | R. $(x^2 + 2)(x - 6)(x + 6)$                   |
| _____ 15. $2x^2 - 14x + 20$                       | R. $3(x - 1)(x^2 + x + 1)(x + 1)(x^2 - x + 1)$ |
| _____ 16. $x^4 - 34x^2 - 72$                      | T. $2(x + 7)^2$                                |
| _____ 17. $54x^7y^3 + 2x$                         | T. $(x + 9)(x - 2)$                            |
| _____ 18. $x^6 + x^3 - 2$                         | U. $(x + 2)(x^2 - 2x + 4)$                     |
| _____ 19. $5x^2 - 6x + 1$                         | X. $(2x + 1)(3x - 2)$                          |