Homework - Factoring ($ax^2 + bx + c$ and perfect squares)

Name: _____ Date: _____

Factor the following polynomials completely:

1. $2a^2 + 3a + 1$

2. $3b^2 + 5b - 2$

3. $3c^2 + c - 2$

4. $3d^2 + 8d + 5$

5. $7e^2 - 84e - 196$

6. $g^2 + 5gh + 6h^2$

7. $4y^2 - 8y + 3$

8. $2km^2 + 11km + 5k$

9. $7f^4 + 18f^2 - 9$

10. $2n^4 + 7n^2 + 5$

11. $2x^3y + 5x^2y^2 + 3xy^3$

12. $3s^2 + 7st - 6t^2$

13. $p^2 - 64$

14. $9r^2 - 81$

15. $16 - 49u^2$

16. $25v^2 - 169w^2$

17. $1 - 16x^4$

18. $y^4 - 16$

19. $63a^2b - 28b$

Answers: (2a+1)(a+1); (3b-1)(b+2); (3c-2)(c+1); (3d+5)(d+1); 7(e+2)(e-14); (g+3h)(g+2h); (2y-3)(2y-1); k(2m+1)(m+5); $(7f^2-3)(f^2+3)$; $(2n^2+5)(n^2+1)$; xy(2x+3y)(x+y); (3s-2t)(s+3t); (p-8)(p+8); (3r-9)(3r+9); (4-7u)(4+7u); (5v-13w)(5v+13w); $(1-2x)(1+2x)(1+4x^2)$; $(y-2)(y+2)(y^2+4)$; 7b(3a+2)(3a-2)