Copy down problems and show work.

Section 6.4

Factor completely.

1. $x^6 - 64$

2. $(x+1)^3 + 1$

3. $24x^{2n} - 6$

4. $5x^{100} - 80y^{100}$

5. $(y-1)^4 - (y-1)^2$

6. $4x^8 + 12x^4 y^3 + 9y^6$

7. $16x^4 - 8x^2 + 1$

8. $x^2 - 10x + 25 - y^2$

9. $9x^2 + 24x + 16 - 25y^2$

10. $49y^2 - x^2 - 8x - 16$

11. $2y^6 - 8y^4 + 5y^2 - 20$

12. $27x^6 - 343$

13. $16x^{3a} + 2y^{9c}$

Factor by completing the square.

14. $x^4 + 4y^4$

15. $x^2 - 40x + 384$

16. $x^4 + x^2 y^2 + y^4$

17. $x^2 - 22x + 968$