Adv.Alg.II 7.1-7.6 Chapter Test (B) Good Luck to

Each question is worth 4 pts. Block

Multiply.

1. (x +2)(x – 7 ) 1.

2. (10x + 8d)(10x – 8d) 2.

3. (3x + 7)2 3.

4. (x -4)(4x2 -5x + 6) 4.

5. (x – 2)3 5.

6. (x + 6)(2x – 4)(x – 8) 6.

7. (2y + 3)3  7.

8. (x2 – 3x + 5)(x2 – 7x + 1) 8.

Factor completely.

9. x2 – 81 9.

10. x3 + 125 10.

11. x2 – 2x – 15 11.

12. 10x3 – 15x2 + 2x – 3 12.

13. 4x2 – 32x + 64 13.

14. x4 – y4 14.

15. 6x2 + 7x – 20 15.

16. 2c4 – 128c 16.

Calculate the discriminant and use it to decide if the polynomial factors. Factor the

polynomial if possible.

17. 7x2 – 30x + 11 17.

18. 20x2 + 39x + 18 18.

Do the long division and write the expression in mixed number form, or in polynomial form if the remainder is zero.

19. $\frac{6x^{3}+ 2x^{2}+ 11x-10}{3x-2} $ 19.

20. $\frac{x^{3}- 3x + 2}{x + 2}$ 20.

Use synthetic division to find the quotient and remainder.

21. $\frac{x^{3}+ 5x^{2}- 20}{x + 3}$ 21.

22. $\frac{x^{3}- 9x^{2}+ 23x - 15}{x - 5}$ 22.

Use the Factor Theorem or the pattern for factoring the sum or difference of like, odd powers to factor completely.

23. x3 + 3x2 – 6x – 8 23.

24. x5 – 32 24.

Sketch the graph. Write and label the discontinuities on the line provided.

25. *f(x) =* $\frac{(x-1)}{x^{2}+ 3x-4}$ 25.