

8A CC Unit 13 Extra Practice (Factoring)

How do we recognize which method to use when factoring?

- 1) Always start with the **GCF** method (ask yourself, is there a **GCF among the terms**?)
- 2) Is it $x^2 + bx + c$? Think about two numbers that **sum to b** and **multiply to c** .
- 3) Is it **DOTS**? Do you see a binomial that is a **difference of two squares**? Take the square root of each term.
- 4) Keep in mind, **sometimes you can only factor once**. Be able to recognize when a polynomial can be factored further and when a polynomial is prime.

Factor Completely

1. $2a^2 - 2b^2$

2. $4x^3 - 4x^2$

3. $ax^2 - ay^2$

4. $st^2 - 9s$

5. $2x^2 - 32$

6. $3x^2 - 27y^2$

7. $3x^2 + 6x + 3$

8. $a^4 - 16$

9. $x^3 - 49x$

10. $x^3 + 5x^2 + 10x$

11. $\pi c^2 - \pi d^2$

12. $4ax^2 + 8ax - 60a$

13. $4r^2 - 4r - 48$

14. $63c^2 - 7$

15. $d^3 - 8d^2 + 16d$

16. $x^4 + 2x^2 - 24$

17. $4x^5 - 64x$

18. $x^2 + 9$

19. $x^4 - 13x^2 + 36$

*20. $3x^2 + 5x + 2$