Name:_____ Period:_____

SM2H 3.4 Factoring Differences of Squares A.SSE.2 2018-19

1. How can you tell whether a binomial is a difference of squares?

2. How can you tell if a trinomial is a perfect square trinomial?

Determine if the following is a difference of squares. If it is a difference of squares, factor it using the identity.

3. $x^2 - 1$

4. $36m^2 - 49$

5. $q^2 + 49$

6. $16x^2 + 25$

7. $81v^2 - 225y^2$

8. $x^4 - 9$

Determine if the following are perfect square trinomials. If they are perfect square trinomials, factor them using the identity.

9. $x^2 + 8x + 16$

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

11. $x^2 + 14x - 49$

12. $x^2 - x + 20$

13. $9x^2 + 24x + 25$

14. $25x^2 + 90x + 81$

Factor each polynomial completely. Don't forget to check for a common factor first. If the polynomial is prime, say so.

15. $y^2 - 121$

16. $2v^2 - 32$

17. $w^2 + w - 6$

18. $-8v + 12$

19. $6x^2 - 13x + 5$

20. $-3k^2 - 24k + 60$

21. $144 - 49t^2$

22. $3x^2 + 75$

23. $3x^2 + 5x - 28$

24. $v^2 - 8v + 12$

25. $4x^2 + 19x - 30$

26. $2t^2 - 5t + 3$

27. $25a^2 - 121b^2$

28. $-18p^2 + 32q^2$

29. $x^4 - 81$

Solve each equation.

30. $\dfrac{x-8}{2x+5} = 4$

31. $-(x-16) - x = -5x$