SM 2

Name:_____ Period:_____

SM2 HW 5.5A Factoring: $x^2 + bx + c$

Factor each trinomial. Don't forget to factor out the GCF first, if there is one. If the trinomial is prime, say so.

1. $d^2 + 20d + 96$

$ac =$_____ $b =$____

Factors of ac:

Which factors add to b?

Factor the expression.

2. $z^2 - 3z - 10$

$ac =$_____ $b =$____

Factors of ac:

Which factors add to b?

Factor the expression.

3. $w^2 + 7w - 18$

$ac =$_____ $b =$____

Factors of ac:

Which factors add to b?

Factor the expression.

4. $x^2 - 49$

Factors of ac:

Which factors add to b?

Factor the expression.

5. $u^2 - 8u - 8$

Factors of ac:

Which factors add to b?

Factor the expression.

6. $x^2 + 4x - 32$

Factors of ac:

Which factors add to b?

Factor the expression.

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

8. $u^2 - 16u + 60$

9. $n^2 - 4n - 32$

10. $s^2 - 16$

11. $3y^2 + 21y + 36$

12. $r^3 + 3r^2 - 54r$

13. $-2a^2 + 14a + 36$

14. $2m^3 - 32m^2 + 128m$

15. $-3k^2 - 24k + 60$

16. In your own words, explain how to factor a trinomial of the form $x^2 + bx + c$.

17. Explain how to tell whether a trinomial of the form $x^2 + bx + c$ is prime.

BONUS:

18. $x^2 + 2xy - 15y^2$

SM 2

Name:_____ Period:_____

SM2 HW 5.5B Factoring Differences of Squares

Factor each binomial completely, if possible. Don't forget to check for common factors.

1. $x^2 - 1$
2. $k^2 - 36$
3. $q^2 + 49$
4. $y^2 - 121$
5. $p^2 - 9$
6. $2v^2 - 32$
7. $36m^2 - 49$
8. $81n^2 - 1$
9. $81v^2 - 225$
10. $512x^2 - 8$
11. $3x^2 + 75$
12. $169y^2 - 100$
13. $144 - 49t^2$
14. $128u^2 - 50$
15. $196k^2 - 81$
16. $25a^2 - 121b^2$
17. $-18p^2 + 32q^2$
18. $z^4 - 81$
19. How can you tell whether a binomial is a difference of squares?