Principles of Algebra Name/Date Clee / Today

ALL PROBLEMS CAN BE COMPLETED ON THIS WORKSHEET

WS 13A.3 – Even More Factoring by Reverse FOIL

#1-20, Factor by Reverse FOIL. If a polynomial is not factorable, write "prime." (Hint: there is only one problem that is prime)

Reverse FOIL
① Force FIRST
② Force SIGNS
③ Force LAST
④ Check OI

Reverse FOIL works on trinomials only.

1. $y^2 + 14y + 13$
   $= (y+13)(y+1)$

2. $2m^2 - 11m - 21$
   $= (2m+3)(m-7)$

3. $2z^2 + 7z + 8$
   prime

4. $x^2 + 20x + 91$
   $= (x+13)(x+7)$

5. $14k^2 + 29k + 12$
   $= (7k+4)(2k+3)$

6. $6z^2 - z - 5$
   $= (6z+5)(z-1)$

7. $n^2 - 9n + 14$
   $= (n-7)(n-2)$

8. $16x^2 - 8x - 15$
   $= (4x+3)(4x-5)$

9. $14d^2 + 11d - 15$
   $= (7d-5)(2d+3)$

10. $54 - 21a + a^2 = a^2 - 21a + 54$
    $= (a-18)(a-3)$

11. $34d^2 - 41d - 15$
    $= (17d+5)(2d-3)$

12. $26c^2 + 29c - 15$
    $= (13c-5)(2c+3)$

13. $n^2 - 12np + 35p^2$
    $= (n-7p)(n-5p)$

14. $7s^2 - 20st - 3t^2$
    $= (7s+t)(s-3t)$

15. $3a^2 - 16ab + 5b^2$
    $= (3a-b)(a-5b)$

16. $r^2 + 33rt + 32t^2$
    $= (r+32t)(r+t)$

17. $8n^2 - 9np - 14p^2$
    $= (8n+7p)(n-2p)$

18. $27a^2 - 12ab - 32b^2$
    $= (9a+8b)(3a-4b)$

19. $z^6 - 10z^3 - 75$
    $= (z^3-15)(z^3+5)$

20. $30d^2 - 37de - 4e^2$
    $= (10d+e)(3d-4e)$