Principles of Algebra

Name/Date Clee / Today

ALL PROBLEMS CAN BE COMPLETED ON THIS WORKSHEET

WS 13A.5 – Reverse FOIL for Days

#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

1. $m^2 - 9m - 10$ (F, OI, L)
   $= (m-10)(m+1)$
2. $t^2 + 16t + 39$ (F, OI, L)
   $= (t+13)(t+3)$
3. $c^2 + 7c - 18$ (F, OI, L)
   $= (c+9)(c-2)$
4. $b^2 - 20b + 19$ (F, OI, L)
   $= (b-19)(b-1)$
5. $13z^2 + 19z + 6$ (F, OI, L)
   $= (13z+6)(z+1)$
6. $24x^2 - 10x - 1$ (F, OI, L)
   $= (12x+1)(2x-1)$
7. $-15n + n^2 + 26 = n^2 - 15n + 26$ (F, OI, L)
   $= (n-13)(n-2)$
8. $m^2 - 2mn - 15n^2$ (F, OI, L)
   $= (m-5n)(m+3n)$
9. $20z^2 + 49z + 30$ (F, OI, L)
   $= (5z+6)(4z+5)$
10. $18w^2 + 11w - 24$ (F, OI, L)
    $= (9w-8)(2w+3)$
11. $2r^2 + 15rt + 7t^2$ (F, OI, L)
    $= (2r+t)(r+7t)$
12. $7n^2 - 19nq + 10q^2$ (F, OI, L)
    $= (7n-5q)(n-2q)$
13. $5x^2 + 18xy - 8y^2$ (F, OI, L)
    $= (5x-2y)(x+4y)$
14. $m^2 + 9mn + 21n^2$ (F, OI, L)
    prime
15. $10c^2 + 99cd - 10d^2$ (F, OI, L)
    $= (10c-d)(c+10d)$
16. $14k^2 - 83km + 33m^2$ (F, OI, L)
    $= (7k-3m)(2k-11m)$
17. $a^2 - 29ab + 100b^2$ (F, OI, L)
    $= (a-25b)(a-4b)$
18. $36q^2 + 12qt - 35t^2$ (F, OI, L)
    $= (6q+7t)(6q-5t)$
19. $15c^{4r} + 14c^{2r} - 16$ (F, OI, L)
    $= (5c^{2r}+8)(3c^{2r}-2)$
20. $20d^{2r+16} - 23d^{r+8} + 6$ (F, OI, L)
    $= (5d^{r+8}-2)(4d^{r+8}-3)$