Lesson 7.5 Factoring Trinomials (a = 1)

Name: _____ Date: _____

For $x^2 + bx + c$, find two numbers that multiply to c and add to b. GCF first. Last five are challenge problems!

1. Factor: $x^2 + 14x + 40$

show your work

2. Factor: $x^2 + 12x + 36$

show your work

3. Factor: $x^2 + 15x + 56$

show your work

4. Factor: $x^2 + 15x + 50$

show your work

5. Factor: $x^2 + 10x + 16$

show your work

6. Factor: $x^2 + 6x + 9$

show your work

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7. Factor: $x^2 + 18x + 81$

show your work

8. Factor: $x^2 - x - 2$

show your work

9. Factor: $x^2 + 4x - 21$

show your work

10. Factor: $x^2 + 6x + 8$

show your work

11. Factor: $x^2 + 12x + 20$

show your work

12. Factor: $x^2 - 10x + 21$

show your work

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13. Factor: $x^2 + 12x + 27$

show your work

14. Factor: $x^2 + 2x - 3$

show your work

15. Factor: $x^2 - 7x - 8$

show your work

16. Factor: $x^2 + 8x + 7$

show your work

17. Factor: $x^2 + 10x + 21$

show your work

18. Factor: $x^2 + 9x - 10$

show your work

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19. Factor: $x^2 - 4x + 3$

show your work

20. Factor: $x^2 + 2x - 80$

show your work

21. Factor completely: $3x^2 + 15x + 18$

show your work ★ CHALLENGE

22. Factor completely: $x^3 - x^2 - 20x$

show your work ★ CHALLENGE

23. Factor: $x^2 + 2x + 8$. If it does not factor, say so.

show your work ★ CHALLENGE

24. Find a value of k so that $x^2 + kx + 12$ factors as $(x + 2)(x + 6)$.

show your work ★ CHALLENGE

25. Factor completely: $x^2 - 4x - 32$, then find the zeros of $y = x^2 - 4x - 32$.

show your work ★ CHALLENGE

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