Day 4 Homework : Omit # 11, 15, 18 Remember to show some work. Do NOT just put answers! ☺

Factor each trinomial.

1. $x^2 - 9x + 14$
2. $a^2 - 9a - 36$
3. $x^2 + 2x - 15$
4. $n^2 - 8n + 15$
5. $b^2 + 22b + 21$
6. $c^2 + 2c - 3$
7. $x^2 - 5x - 24$
8. $n^2 - 8n + 7$
9. $m^2 - 10m - 39$
10. $z^2 + 15z + 36$
11. ~~$s^2 - 13st - 30t^2$~~
12. $y^2 + 2y - 35$
13. $r^2 + 3r - 40$
14. $x^2 + 5x - 6$
15. ~~$x^2 - 4xy - 5y^2$~~
16. $r^2 + 16r + 63$
17. $v^2 + 24v - 52$
18. ~~$k^2 - 27kj - 90j^2$~~

Solve each equation. Check your solutions.

19. $a^2 + 3a - 4 = 0$
20. $x^2 - 8x - 20 = 0$
21. $b^2 + 11b + 24 = 0$
22. $y^2 + y - 42 = 0$
23. $k^2 + 2k - 24 = 0$
24. $r^2 - 13r - 48 = 0$
25. $n^2 - 9n = -18$
26. $2z + z^2 = 35$
27. $-20x + 19 = -x^2$
28. $10 + a^2 = -7a$
29. $z^2 - 57 = 16z$
30. $x^2 = -14x - 33$
31. $22x - x^2 = 96$
32. $-144 = q^2 - 26q$
33. $x^2 + 84 = 20x$

Factor: (Some of these may be prime)	Solve: (we have 5 methods…do not say “prime!!!”)	Graph (use a separate sheet of graph paper):
34. $x^2 + 8x + 15$	$0 = x^2 + 8x + 15$	$y = x^2 + 8x + 15$
35. $x^2 + 8x – 12$	$x^2 + 8x = 12$	$y = x^2 + 8x – 12$
36. $x^2 + 8x$	$x^2 = - 8x$	$y = x^2 + 8x$
37. $-x^2 + 9x – 18$	$-x^2 + 9x = 18$	$y = -x^2 + 9x – 18$