Factor out the GCF from each

$3x + 3$

$6x + 36$

$8t - 16$

$25x - 10$

$24y^2 - 18$

$x^2 + x$

$25u^2 - 14u$

$2x^4 + 6x^3$

$27x^2 + 9y^2$

$12x^2 - 2x$

$10r^3 - 35r$

$12x^2 + 16x - 8$

$100 - 75z - 50z^2$

$9x^4 + 6x^3 + 18x^2$

$5u^3 + 5u^2 + 5u$

$16a^3b^3 + 24a^4b^3$

Factor out the common binomial from each

$x(x - 3) + 5(x - 3)$

$y(q - 5) - 10(q - 5)$

$x^3(y + 4) + y(y + 4)$

Factor each by grouping

$x^3 + 6x^2 + 2x + 12$

$4u^3 - 2u^2 - 6u + 3$

$x^3 + 7x - 3x^2 - 21$

$5x^2 + 10x^3 + 4 + 8x$

$ay^2 + 3ay + 3y + 9$

Factor each of the following and explain your strategy.

a. $x^2 - 2x - 15$

b. $x^2 + 2x - 15$

c. $x^2 + 8x + 15$

d. $x^2 - 8x + 15$

Factor, write prime if prime.

1. $x^2 + 6x + 8$
2. $c^2 + 5c + 6$
3. $y^2 - 9y + 14$
4. $x^2 - 10x + 16$
5. $a^2 + 12a + 27$
6. $x^2 - 14x + 24$
7. $x^2 - 15x + 36$
8. $y^2 + 21y + 54$
9. $m^2 + 13m - 36$
10. $x^2 - 8x + 15$
11. $y^2 - 4y - 32$
12. $x^2 - x - 6$
13. $y^2 + 3y - 18$
14. $b^2 + 7b - 18$
15. $a^2 + a - 56$
16. $c^2 - 4c - 12$
17. $x^2 - 9x - 36$
18. $y^2 + 4y - 21$
19. $x^2 - 22x - 75$
20. $x^2 - 3x - 40$
21. $45 + 14y + y^2$
22. $x^2 - 13x + 36$