FACTORING PRACTICE
ANSWERS

To factor $x^2 + bx + c$

1. Arrange the terms in descending order.
2. Factor out any greatest common factors.
3. List the combinations of 2 numbers that multiply to c and add to b. Make sure to check for negatives to figure out which combination is the right onw.
4. Each number in that combination is part of a factor. Put your answer in the form (x+n)(x+m), where n and m are your 2 numbers.
5. Remember you can always check your answer by multiplying.

Difference of squares

Use this when you want to factor something that looks like $x^2 - a^2$, where a^2 is a number that is a perfect square.
$x^2 - a^2 = (x - a)(x + a)$

Factor

1. (x + 9)(x + 4)

2. (x + 6)(x + 3)

3. (x + 7)(x + 3)

4. (x - 6)(x + 2)

5. (x + 6)(x - 6)

6. 2(x + 2)(x + 5)

7. (x − 9)(x + 2)

8. (x − 9)(x + 9)

9. (x − 9)(x − 2)

10. (x + 12)(x − 1)

11. (x − 4)(x + 2)

12. (x − 5)(x + 5)

13. (x − 3)(x − 4)

14. (x − 6)(x + 4)

15. 2(x + 8)(x + 3)

16. 3(x − 6)(x - 3)

17. 4(x + 7)(x − 5)

18. (x − 7)(x + 7)

19. 5(x + 4)(x + 4)

20. x(x − 8)(x + 2)

21. 2x(x − 7)(x - 1)

22. x(x - 4)(x + 4)

23. 2x(x − 9)

24. 3(x − 6)(x − 2)

25. 2xy(x − 8)(x + 8)