Identifying Factorable Polynomials

Write the letter of the factorable form next to each expression. Letters may be used more than once. In some cases, more than one answer may be correct.

A. Difference of squares
B. Perfect square trinomial
C. $x^2 + bx + c$ short-cut
D. Use trial-and-error or expand to factor by grouping
E. Factor by grouping
F. Sum of cubes
G. Difference of cubes
H. Perfect square trinomial within a difference of squares
I. Prime

1. ____ $a^2 - 4a - 12$

2. ____ $m^2 - n^2 + 5m - 5n$

3. ____ $27z^3 - 8$

4. ____ $k^2 + 9$

5. ____ $64x^2 - 80x + 25$

6. ____ $4k^2 - 12k + 9$

7. ____ $m^2 - n^2$

8. ____ $a^2 + 6a + 3$

9. ____ $r^3 + 1$

10. ____ $x^2 - 2x + 1 - y^2$

11. ____ $a^2 + 6a + 9$

12. ____ $2m^2 - 7m - 30$

13. ____ $20 + 5r + 12s + 3rs$

14. ____ $16x^4 - y^4$

15. ____ $3a - 15ab - 4b$