Name_____

Factor by Grouping

Factor each completely.

1) $8n^3 - 5n^2 - 48n + 30$

$(n^2 - 6)(8n - 5)$

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

$(7x^2 + 1)(x + 3)$

3) $7r^3 - r^2 + 7r - 1$

$(r^2 + 1)(7r - 1)$

4) $25x^3 + 40x^2 - 5x - 8$

$(5x^2 - 1)(5x + 8)$

5) $4n^3 - 20n^2 + 3n - 15$

$(4n^2 + 3)(n - 5)$

6) $48m^3 + 6m^2 - 40m - 5$

$(6m^2 - 5)(8m + 1)$

7) $30m^3 + 5m^2 + 18m + 3$

$(5m^2 + 3)(6m + 1)$

8) $4n^3 - 6n^2 - 6n + 9$

$(2n^2 - 3)(2n - 3)$