

## Factoring Polynomial

Date \_\_\_\_\_ Period \_\_\_\_\_

**Factor each completely.**

1)  $9x^3 + 6x^2 + 21x + 14$

2)  $4k^3 + k^2 - 4k - 1$

3)  $7x^3 - 3x^2 + 14x - 6$

4)  $24n^3 + 20n^2 - 42n - 35$

5)  $35n^2 - 20n - 100$

6)  $3b^2 + 7b - 20$

7)  $3x^2 - 11x + 8$

8)  $28x^2 - 12x$

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Date \_\_\_\_\_ Period \_\_\_\_\_

**Factor each completely.**

1)  $9x^3 + 6x^2 + 21x + 14$   
 $(3x^2 + 7)(3x + 2)$

3)  $7x^3 - 3x^2 + 14x - 6$   
 $(x^2 + 2)(7x - 3)$

5)  $35n^2 - 20n - 100$   
 $5(7n + 10)(n - 2)$

7)  $3x^2 - 11x + 8$   
 $(3x - 8)(x - 1)$

2)  $4k^3 + k^2 - 4k - 1$   
 $(k - 1)(k + 1)(4k + 1)$

4)  $24n^3 + 20n^2 - 42n - 35$   
 $(4n^2 - 7)(6n + 5)$

6)  $3b^2 + 7b - 20$   
 $(3b - 5)(b + 4)$

8)  $28x^2 - 12x$   
 $4x(7x - 3)$