

Factor Polynomials 5

Date _____ Period _____

Factor each.

1) $f(x) = x^4 + 27x$

2) $f(x) = x^6 - 1$

3) $f(x) = x^6 - 64$

4) $f(x) = x^3 + 8$

5) $f(x) = x^3 - 1$

6) $f(x) = x^4 + 64x$

7) $f(x) = x^3 - 125$

8) $f(x) = x^3 - 27$

9) $f(x) = x^4 - x^3 - 4x^2 + 4x$

10) $f(x) = x^4 - 7x^2 + 10$

11) $f(x) = x^6 + 4x^4 - 25x^2 - 100$

12) $f(x) = x^4 + 2x^2 - 3$

13) $f(x) = x^4 - 8x^2 + 15$

14) $f(x) = x^4 + 9x^2 + 14$

15) $f(x) = x^3 - 4x^2 - 4x + 16$

16) $f(x) = x^4 + 2x^2 - 35$

Answers to Factor Polynomials 5 (ID: 1)

- 1) $f(x) = x(x+3)(x^2 - 3x + 9)$ 2) $f(x) = (x+1)(x^2 - x + 1)(x-1)(x^2 + x + 1)$
3) $f(x) = (x+2)(x^2 - 2x + 4)(x-2)(x^2 + 2x + 4)$ 4) $f(x) = (x+2)(x^2 - 2x + 4)$
5) $f(x) = (x-1)(x^2 + x + 1)$ 6) $f(x) = x(x+4)(x^2 - 4x + 16)$ 7) $f(x) = (x-5)(x^2 + 5x + 25)$
8) $f(x) = (x-3)(x^2 + 3x + 9)$ 9) $f(x) = x(x-1)(x+2)(x-2)$ 10) $f(x) = (x^2 - 5)(x^2 - 2)$
11) $f(x) = (x^2 + 4)(x^2 + 5)(x^2 - 5)$ 12) $f(x) = (x+1)(x-1)(x^2 + 3)$
13) $f(x) = (x^2 - 3)(x^2 - 5)$ 14) $f(x) = (x^2 + 7)(x^2 + 2)$ 15) $f(x) = (x-4)(x+2)(x-2)$
16) $f(x) = (x^2 + 7)(x^2 - 5)$