

FACTORIZING POLYNOMIALS

Factor each completely.

1) $x^4 - 3x^2 - 40$

2) $-x^4 + x^2 + 12$

3) $-x^4 - 6x^2 + 40$

4) $a^4 + 6a^2 - 16$

5) $-16u^4 - 48u^2 - 35$

6) $9x^4 - 21x^2 + 10$

7) $25x^4 + 55x^2 + 28$

8) $8x^4 + 2x^2 - 3$

9) $9a^2 + 37a + 4$

10) $8m^2 + 45m - 18$

11) $10n^2 + 61n + 72$

12) $8x^2 - 17x - 21$

13) $40n^3 + 156n^2 + 56n$

14) $6x^2 + 19x + 8$

15) $8n^2 + 64n$

FACTORIZING POLYNOMIALS

Factor each completely.

1) $x^4 - 3x^2 - 40$

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

2) $-x^4 + x^2 + 12$

$$-(x - 2)(x + 2)(x^2 + 3)$$

3) $-x^4 - 6x^2 + 40$

$$-(x - 2)(x + 2)(x^2 + 10)$$

4) $a^4 + 6a^2 - 16$

$$(a^2 - 2)(a^2 + 8)$$

5) $-16u^4 - 48u^2 - 35$

$$-(4u^2 + 5)(4u^2 + 7)$$

6) $9x^4 - 21x^2 + 10$

$$(3x^2 - 2)(3x^2 - 5)$$

7) $25x^4 + 55x^2 + 28$

$$(5x^2 + 4)(5x^2 + 7)$$

8) $8x^4 + 2x^2 - 3$

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

9) $9a^2 + 37a + 4$

$$(a + 4)(9a + 1)$$

10) $8m^2 + 45m - 18$

$$(m + 6)(8m - 3)$$

11) $10n^2 + 61n + 72$

$$(5n + 8)(2n + 9)$$

12) $8x^2 - 17x - 21$

$$(x - 3)(8x + 7)$$

13) $40n^3 + 156n^2 + 56n$

$$4n(5n + 2)(2n + 7)$$

14) $6x^2 + 19x + 8$

$$(2x + 1)(3x + 8)$$

15) $8n^2 + 64n$

$$8n(n + 8)$$