

Factoring Special Cases

Factor each completely.

1) $16n^2 - 9$

$(4n + 3)(4n - 3)$

2) $4m^2 - 25$

$(2m + 5)(2m - 5)$

3) $16b^2 - 40b + 25$

$(4b - 5)^2$

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

$(2x - 1)^2$

5) $9x^2 - 1$

$(3x + 1)(3x - 1)$

6) $n^2 - 25$

$(n + 5)(n - 5)$

7) $n^4 - 100$

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

8) $a^4 - 9$

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

9) $k^4 - 36$

$(k^2 + 6)(k^2 - 6)$

10) $n^4 - 49$

$(n^2 + 7)(n^2 - 7)$

11) $98n^2 - 200$

$2(7n + 10)(7n - 10)$

12) $3 + 6b + 3b^2$

$3(1 + b)^2$

13) $400 - 36v^2$

$4(10 + 3v)(10 - 3v)$

14) $100x^2 + 180x + 81$

$(10x + 9)^2$

15) $10n^2 + 100n + 250$

$10(n + 5)^2$

16) $49n^2 - 56n + 16$

$(7n - 4)^2$

17) $49x^2 - 100$

$(7x + 10)(7x - 10)$

18) $1 - r^2$

$(1 + r)(1 - r)$

19) $10p^3 - 1960p$

$10p(p + 14)(p - 14)$

20) $343b^2 - 7b^4$

$7b^2(7 + b)(7 - b)$

21) $81v^4 - 900v^2$

$9v^2(3v + 10)(3v - 10)$

22) $200m^4 + 80m^3 + 8m^2$

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