

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) $n^4 - 49$

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

$$11) \ 98n^2 - 200$$

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

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

$$3(1 + b)^2$$

$$13) \ 400 - 36v^2$$

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

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

$$(10x + 9)^2$$

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

$$10(n + 5)^2$$

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

$$(7n - 4)^2$$

$$17) \ 49x^2 - 100$$

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

$$18) \ 1 - r^2$$

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

$$19) \ 10p^3 - 1960p$$

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

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

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

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

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

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

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

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