

Practice

Factoring the Difference of Squares

Factor each completely.

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|--------------------------------|--|------------------------|--|
| 1) $9x^2 - 1$ | $(3x+1)(3x-1)$ | 2) $4n^2 - 49$ | $(2n-7)(2n+7)$ |
| 3) $36k^2 - 1$ | $(6k-1)(6k+1)$ | 4) $p^2 - 36$ | $(p-6)(p+6)$ |
| 5) $2x^2 - 18$
$2(x^2 - 9)$ | $2(x-3)(x+3)$ | 6) $196n^2 - 144$ | $4(49n^2 - 36)$
$4(7n-6)(7n+6)$ |
| 7) $180m^2 - 5$ | $5(36m^2 - 1)$
$5(6m-1)(6m+1)$ | 8) $294r^2 - 150$ | $6(49r^2 - 25)$
$6(7r-5)(7r+5)$ |
| 9) $150k^2 - 216$ | $6(25k^2 - 36)$
$6(5k-6)(5k+6)$ | 10) $20a^2 - 45$ | $5(4a^2 - 9)$
$5(2a-3)(2a+3)$ |
| 11) $3n^2 - 75$ | $3(n^2 - 25)$
$3(n+5)(n-5)$ | 12) $24x^3 - 54x$ | $6x(4x^2 - 9)$
$6x(2x-3)(2x+3)$ |
| 13) $a^2 - 25b^2$ | $(a-5b)(a+5b)$ | 14) $4x^2 + 49y^2$ | prime |
| 15) $25x^2 + 16y^2$ | prime | 16) $6a^2 + 96b^2$ | $6(a^2 + 16b^2)$ * factor of 6 but not diff. of square |
| 17) $x^2 - 9y^2$ | $(x-3y)(x+3y)$ | 18) $49x^2 - 25y^2$ | $(7x-5y)(7x+5y)$ |
| 19) $9x^2 - 16y^2$ | $(3x-4y)(3x+4y)$ | 20) $54v^2 - 6u^2$ | $6(9v^2 - u^2)$
$6(3v-u)(3v+u)$ |
| 21) $36a^4 - 25b^4$ | $(6a^2 - 5b^2)(6a^2 + 5b^2)$ | 22) $2x^4r - 72y^4r$ | $2r(x^4 - 36y^4)$
$2r(x^2 - 6y^2)(x^2 + 6y^2)$ |
| 23) $125m^4 - 20n^4$ | $5(25m^4 - 4n^4)$
$5(5m^2 - 2n^2)(5m^2 + 2n^2)$ | 24) $216x^4ay - 6y^5a$ | $6ay(36x^4 - y^4)$
$6ay(6x^2 - y^2)(6x^2 + y^2)$ |
| 25) $4x^4 - 144y^4$ | $4(x^4 - 36y^4)$
$4(x^2 - 6y^2)(x^2 + 6y^2)$ | 26) $4x^4m - 36y^4m$ | $4m(x^4 - 9y^4)$
$4m(x^2 - 3y^2)(x^2 + 3y^2)$ |
| 27) $7x^4 - 28y^4$ | $7(x^4 - 4y^4)$
$7(x^2 - 2y^2)(x^2 + 2y^2)$ | 28) $7x^4 - 343y^4$ | $7(x^4 - 49y^4)$
$7(x^2 - 7y^2)(x^2 + 7y^2)$ |
| 29) $16m^6 - n^6$ | $(4m^3 - n^3)(4m^3 + n^3)$ | 30) $64x^6 - y^6$ | $(8x^3 - y^3)(8x^3 + y^3)$ |