

Factoring Special Cases

Factor each completely.

1) $16n^2 - 9$

2) $4m^2 - 25$

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

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

5) $9x^2 - 1$

6) $n^2 - 25$

7) $n^4 - 100$

8) $a^4 - 9$

9) $k^4 - 36$

10) $n^4 - 49$

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

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

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

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

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

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

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

$$18) 1 - r^2$$

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

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

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

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

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) $n^4 - 49$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$18) 1 - r^2$$

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

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

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

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

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

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

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

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

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