

Factoring: Difference of Squares

Factor each completely.

① $3x^2 - 75$

② $7x^4 - 343y^4$

③ $4x^2 - 25y^2$

④ $5a^4 - 45a^2b^2$

⑤ $3a^2 - 48$

⑥ $a^4 - 16$

⑦ $2x^4 - 162$

⑧ $64a^2 - 25b^2$

⑨ $81x^2 - 36$

⑩ $4x^2m - 36y^2m$

Factoring: Difference of Squares

Answers

① $3x^2 - 75$

$3(x + 5)(x - 5)$

③ $4x^2 - 25y^2$

$(2x + 5y)(2x - 5y)$

⑤ $3a^2 - 48$

$3(a + 4)(a - 4)$

⑦ $2x^4 - 162$

$2(x^2 + 9)(x + 3)(x - 3)$

⑨ $81x^2 - 36$

$9(3x + 2)(3x - 2)$

② $7x^4 - 343y^4$

$7(x^2 + 7y^2)(x^2 - 7y^2)$

④ $5a^4 - 45a^2b^2$

$5a^2(a + 3b)(a - 3b)$

⑥ $a^4 - 16$

$(a^2 + 4)(a + 2)(a - 2)$

⑧ $64a^2 - 25b^2$

$(8a + 5b)(8a - 5b)$

⑩ $4x^2m - 36y^2m$

$4m(x + 3y)(x - 3y)$