

Name: _____

Perfect Square Binomial

Factor each completely.

① $9x^2 + 18x + 9$

② $49 - 14x + x^2$

③ $225x^2 + 30x + 1$

④ $x^4 + 14x^3 + 49x^2$

⑤ $36x^2 - 48x + 16$

⑥ $81y^2 - 36xy + 4x^2$

⑦ $9x^2 - 24x + 16$

⑧ $9y^2 - 24xy + 16x^2$

⑨ $x^2 + 20x + 100$

⑩ $9y^2 - 72xy + 144x^2$

⑪ $4y^2 + 4xy + x^2$

⑫ $y^2 - 2y + 1$

⑬ $16x^2 - 56x + 49$

⑭ $9y^2 - 12xy + 4x^2$

⑮ $36 + 12x + x^2$

Name:

Perfect Square Binomial

Answers

① $9x^2 + 18x + 9$

② $49 - 14x + x^2$

③ $225x^2 + 30x + 1$

$(3x + 3)^2$

$(7 - x)^2$

$(15x + 1)^2$

④ $x^4 + 14x^3 + 49x^2$

⑤ $36x^2 - 48x + 16$

⑥ $81y^2 - 36xy + 4x^2$

$(x^2 + 7)^2$

$(6x - 4)^2$

$(9y - 2x)^2$

⑦ $9x^2 - 24x + 16$

⑧ $9y^2 - 24xy + 16x^2$

⑨ $x^2 + 20x + 100$

$(3x - 4)^2$

$(3y - 4x)^2$

$(x + 10)^2$

⑩ $9y^2 - 72xy + 144x^2$

⑪ $4y^2 + 4xy + x^2$

⑫ $y^2 - 2y + 1$

$(3y - 12x)^2$

$(2y + x)^2$

$(y - 1)^2$

⑬ $16x^2 - 56x + 49$

⑭ $9y^2 - 12xy + 4x^2$

⑮ $36 + 12x + x^2$

$(4x - 7)^2$

$(3y - 2x)^2$

$(6 + x)^2$