

Name: _____
 CC Algebra Homework

Factoring using DOTS

1) What are the factors of $x^2 - 81$?

- A) $(x + 81)(x - 1)$
- B) $(x - 81)(x + 1)$
- C) $(x - 9)(x - 9)$
- D) $(x + 9)(x - 9)$

2) What are the factors of $25 - c^2$?

- A) $(5 - c)(5 - c)$
- B) $(5 + c)(5 - c)$
- C) $(c + 5)(c - 5)$
- D) $(5 + c)(5 + c)$

3) What are the factors of $4x^2 - 25$?

- A) $(2x + 5)(2x - 5)$
- B) $(4x + 25)(x - 1)$
- C) $(4x - 25)(x + 1)$
- D) $(2x - 5)(2x - 5)$

4) What are the factors of $9x^2 - 16$?

- A) $(9x + 16)(x - 1)$
- B) $(3x - 4)(3x - 4)$
- C) $(9x - 16)(x + 1)$
- D) $(3x + 4)(3x - 4)$

5) What are the factors of $x^2 - 64y^2$?

- A) $(x - 64y)(x + y)$
- B) $(x - 8y)(x - 8y)$
- C) $(x + 8y)(x - 8y)$
- D) $(x + 64y)(x - y)$

6) Expressed in factored form, the binomial $4a^2 - 9b^2$ is equivalent to

- A) $(2a - 3b)(2a - 3b)$
- B) $(2a + 3b)(2a - 3b)$
- C) $(4a - 3b)(a + 3b)$
- D) $(2a - 9b)(2a + b)$

Questions 7 through 15 refer to the following:

Factor the given polynomial:

7) $49 - x^2$

8) $100a^2 - 9$

9) $81 - 4x^2$

13) $9y^2 - 25$

10) $p^2 - q^2$

14) $9a^2 - 4b^2$

11) $36 - p^4$

15) $x^4 - 25$

12) $p^2 - 100$

1) D 2) B 3) A 4) D 5) C

6) B

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

8) $(10a + 3)(10a - 3)$

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

10) $(p + q)(p - q)$

11) $(6 + p^2)(6 - p^2)$

12) $(p + 10)(p - 10)$

13) $(3y + 5)(3y - 5)$

14) $(3a + 2b)(3a - 2b)$

15) $(x^2 + 5)(x^2 - 5)$