

A.A.19: Factoring the Difference of Perfect Squares 4: Identify and factor the difference of two perfect squares

- 1 The expression $x^2 - 16$ is equivalent to
- 2 The expression $100n^2 - 1$ is equivalent to
- 3 Which expression is equivalent to $64 - x^2$?
- 4 Which expression is equivalent to $121 - x^2$?
- 5 Which expression is equivalent to $9x^2 - 16$?
- 6 The expression $9x^2 - 100$ is equivalent to
- 7 The expression $x^2 - 36y^2$ is equivalent to
- 8 Factored, the expression $16x^2 - 25y^2$ is equivalent to
- 9 The expression $9a^2 - 64b^2$ is equivalent to
- 10 Which expression is equivalent to $81 - 16x^2$?
- 11 When $a^3 - 4a$ is factored completely, the result is
- 12 Which expression represents $36x^2 - 100y^6$ factored completely?
- 13 Factor completely: $4x^3 - 36x$
- 14 If Ann correctly factors an expression that is the difference of two perfect squares, her factors could be
 - 1) $(2x + y)(x - 2y)$
 - 2) $(2x + 3y)(2x - 3y)$
 - 3) $(x - 4)(x - 4)$
 - 4) $(2y - 5)(y - 5)$
- 15 When $9x^2 - 100$ is factored, it is equivalent to $(3x - b)(3x + b)$. What is a value for b ?

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1 ANS:

$$(x + 4)(x - 4)$$

REF: fall0706ia

2 ANS:

$$(10n + 1)(10n - 1)$$

REF: 011306ia

3 ANS:

$$(8 - x)(8 + x)$$

REF: 011201ia

4 ANS:

$$(11 - x)(11 + x)$$

REF: 081008ia

5 ANS:

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

REF: 080902ia

6 ANS:

$$(3x - 10)(3x + 10)$$

REF: 010909ia

7 ANS:

$$(x + 6y)(x - 6y)$$

REF: 061101ia

8 ANS:

$$(4x - 5y)(4x + 5y)$$

REF: 060804ia

9 ANS:

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

REF: 081207ia

10 ANS:

$$(9 - 4x)(9 + 4x)$$

REF: 061506ia

11 ANS:

$$a(a-2)(a+2)$$

$$a^3 - 4a = a(a^2 - 4) = a(a-2)(a+2)$$

REF: 011108ia

12 ANS:

$$4(3x+5y^3)(3x-5y^3)$$

$$36x^2 - 100y^6 = 4(9x^2 - 25y^6) = 4(3x+5y^3)(3x-5y^3)$$

REF: 081129ia

13 ANS:

$$4x(x+3)(x-3). \quad 4x^3 - 36x = 4x(x^2 - 9) = 4x(x+3)(x-3)$$

REF: 060932ia

14 ANS: 2

REF: 011022ia

15 ANS:

10

REF: 081403ia