

A.SSE.A.2: Factoring the Difference of Perfect Squares 3

- 1 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) $(2y - 5)(y - 5)$
- 2 One factor of the expression $x^2y^2 - 16$ is
 - 1) $xy - 4$
 - 2) $xy - 8$
 - 3) $x^2 - 4$
 - 4) $x^2 + 8$
- 3 Written in factored form, the binomial $a^2 - 16b^2$ is equivalent to
 - 1) $(a - 4b)(a + 4b)$
 - 2) $(a - 4b)(a - 4b)$
 - 3) $(a - 8b)(a + 8b)$
 - 4) $(a - 8b)(a - 8b)$
- 4 The expression $x^2 - 36y^2$ is equivalent to
 - 1) $(x - 6y)(x - 6y)$
 - 2) $(x - 18y)(x - 18y)$
 - 3) $(x + 6y)(x - 6y)$
 - 4) $(x + 18y)(x - 18y)$
- 5 Expressed in factored form, the binomial $4a^2 - 9b^2$ is equivalent to
 - 1) $(2a - 3b)(2a - 3b)$
 - 2) $(2a + 3b)(2a - 3b)$
 - 3) $(4a - 3b)(a + 3b)$
 - 4) $(2a - 9b)(2a + b)$
- 6 The expression $9a^2 - 64b^2$ is equivalent to
 - 1) $(9a - 8b)(a + 8b)$
 - 2) $(9a - 8b)(a - 8b)$
 - 3) $(3a - 8b)(3a + 8b)$
 - 4) $(3a - 8b)(3a - 8b)$
- 7 Factored, the expression $16x^2 - 25y^2$ is equivalent to
 - 1) $(4x - 5y)(4x + 5y)$
 - 2) $(4x - 5y)(4x - 5y)$
 - 3) $(8x - 5y)(8x + 5y)$
 - 4) $(8x - 5y)(8x - 5y)$
- 8 If the area of a rectangle is expressed as $x^4 - 9y^2$, then the product of the length and the width of the rectangle could be expressed as
 - 1) $(x - 3y)(x + 3y)$
 - 2) $(x^2 - 3y)(x^2 + 3y)$
 - 3) $(x^2 - 3y)(x^2 - 3y)$
 - 4) $(x^4 + y)(x - 9y)$
- 9 Factor: $9x^2 - y^2$

10 Factor: $6a^2 - 6b^2$

11 Factor: $28a^2 - 7b^2$

12 Factor: $12a^2 - 27b^2$

13 Factor completely: $3ax^2 - 27a$

14 Factor: $8a^3 - 32ab^2$

15 Factor: $x^4 - y^4$

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Answer Section

- 1 ANS: 2 REF: 011022ia
2 ANS: 1 REF: 080711a
3 ANS: 1 REF: 061627ia
4 ANS: 3 REF: 061101ia
5 ANS: 2 REF: 010201a
6 ANS: 3 REF: 081207ia
7 ANS: 1 REF: 060804ia
8 ANS: 2 REF: 061503ai
9 ANS:
 $(3x + y)(3x - y)$
REF: 019506al
10 ANS:
 $6(a + b)(a - b)$
REF: 099607al
11 ANS:
 $7(2a + b)(2a - b)$
REF: 069607al
12 ANS:
 $3(2a + 3b)(2a - 3b)$
REF: 069303al
13 ANS:
 $3a(x + 3)(x - 3)$. $3ax^2 - 27a = 3a(x^2 - 9) = 3a(x + 3)(x - 3)$
REF: 080434a
14 ANS:
 $8a(a + 2b)(a - 2b)$
REF: 069503al
15 ANS:
 $(x^2 + y^2)(x + y)(x - y)$
REF: 010602al