

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

- 1 The expression $x^2 - 16$ is equivalent to
 - 1) $(x+2)(x-8)$
 - 2) $(x-2)(x+8)$
 - 3) $(x+4)(x-4)$
 - 4) $(x+8)(x-8)$
- 2 Which expression is equivalent to $64 - x^2$?
 - 1) $(8-x)(8-x)$
 - 2) $(8-x)(8+x)$
 - 3) $(x-8)(x-8)$
 - 4) $(x-8)(x+8)$
- 3 Which expression is equivalent to $121 - x^2$?
 - 1) $(x-11)(x-11)$
 - 2) $(x+11)(x-11)$
 - 3) $(11-x)(11+x)$
 - 4) $(11-x)(11-x)$
- 4 The expression $100n^2 - 1$ is equivalent to
 - 1) $(10n+1)(10n-1)$
 - 2) $(10n-1)(10n-1)$
 - 3) $(50n+1)(50n-1)$
 - 4) $(50n-1)(50n-1)$
- 5 Which expression is equivalent to $9x^2 - 16$?
 - 1) $(3x+4)(3x-4)$
 - 2) $(3x-4)(3x-4)$
 - 3) $(3x+8)(3x-8)$
 - 4) $(3x-8)(3x-8)$
- 6 The expression $9x^2 - 100$ is equivalent to
 - 1) $(9x-10)(x+10)$
 - 2) $(3x-10)(3x+10)$
 - 3) $(3x-100)(3x-1)$
 - 4) $(9x-100)(x+1)$
- 7 When $9x^2 - 100$ is factored, it is equivalent to $(3x-b)(3x+b)$. What is a value for b ?
 - 1) 50
 - 2) 10
 - 3) 3
 - 4) 100
- 8 Which expression is equivalent to $81 - 16x^2$?
 - 1) $(9-8x)(9+8x)$
 - 2) $(9-8x)(9+2x)$
 - 3) $(9-4x)(9+4x)$
 - 4) $(9-4x)(9-4x)$
- 9 Factor completely: $3x^2 - 27$
 - 1) $3(x-3)^2$
 - 2) $3(x^2 - 27)$
 - 3) $3(x+3)(x-3)$
 - 4) $(3x+3)(x-9)$
- 10 Written in simplest factored form, the binomial $2x^2 - 50$ can be expressed as
 - 1) $2(x-5)(x-5)$
 - 2) $2(x-5)(x+5)$
 - 3) $(x-5)(x+5)$
 - 4) $2x(x-50)$
- 11 One of the factors of $4x^2 - 9$ is
 - 1) $(x+3)$
 - 2) $(2x+3)$
 - 3) $(4x-3)$
 - 4) $(x-3)$
- 12 What is a common factor of $x^2 - 9$ and $x^2 - 5x + 6$?
 - 1) $x+3$
 - 2) $x-3$
 - 3) $x-2$
 - 4) x^2
- 13 Factor: $x^2 - 36$
- 14 Factor: $9 - x^2$
- 15 Factor: $16x^2 - 9$
- 16 Factor: $3a^2 - 3$
- 17 Factor completely: $5n^2 - 80$
- 18 Factor: $9x^2 - \frac{4}{9}$

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Answer Section

1 ANS: 3 REF: fall0706ia

2 ANS: 2 REF: 011201ia

3 ANS: 3 REF: 081008ia

4 ANS: 1 REF: 011306ia

5 ANS: 1 REF: 080902ia

6 ANS: 2 REF: 010909ia

7 ANS: 2 REF: 081403ia

8 ANS: 3 REF: 061506ia

9 ANS: 3

$$3x^2 - 27 = 3(x^2 - 9) = 3(x + 3)(x - 3)$$

REF: 060109a

10 ANS: 2

$$2x^2 - 50 = 2(x^2 - 25) = 2(x + 5)(x - 5)$$

REF: 080103a

11 ANS: 2 REF: 010105a

12 ANS: 2 REF: 010414a

13 ANS:

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

REF: 019604al

14 ANS:

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

REF: 119404al

15 ANS:

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

REF: 039404al

16 ANS:

$$3(a + 1)(a - 1)$$

REF: 030501al

17 ANS:

$$5(n + 4)(n - 4). \quad 5n^2 - 80 = 5(n^2 - 16) = 5(n + 4)(n - 4)$$

REF: 080533a

18 ANS:

$$\left(3x + \frac{2}{3}\right)\left(3x - \frac{2}{3}\right)$$

REF: 089703al