Name: _____

A.SSE.A.2: Factoring the Difference of Perfect Squares 1a

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 One of the factors of $4x^2 - 9$ is
1) $(x+3)$
2) $(2x+3)$
3) $(4x-3)$
4) $(x-3)$

5 The expression $9x^2 - 100$ is equivalent to
1) $(9x-10)(x+10)$
2) $(3x-10)(3x+10)$
3) $(3x-100)(3x-1)$
4) $(9x-100)(x+1)$

6 Which expression is equivalent to $9x^2 - 16$?
1) $(3x+4)(3x-4)$
2) $(3x-4)(3x-4)$
3) $(3x+8)(3x-8)$
4) $(3x-8)(3x-8)$

7 The expression $49x^2 - 36$ is equivalent to
1) $(7x-6)^2$
2) $(24.5x-18)^2$
3) $(7x-6)(7x+6)$
4) $(24.5x-18)(24.5x+18)$

8 The expression $100n^2 - 1$ is equivalent to
1) $(10n+1)(10n-1)$
2) $(10n-1)(10n-1)$
3) $(50n+1)(50n-1)$
4) $(50n-1)(50n-1)$

9 Factor completely: $3x^2 - 27$
1) $3(x-3)^2$
2) $3(x^2-27)$
3) $3(x+3)(x-3)$
4) $(3x+3)(x-9)$

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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 Which expression is equivalent to $36x^2 - 100$?
1) $4(3x-5)(3x-5)$
2) $4(3x+5)(3x-5)$
3) $2(9x-25)(9x-25)$
4) $2(9x+25)(9x-25)$

12 Which expression is equivalent to $16x^2 - 36$?
1) $4(2x-3)(2x-3)$
2) $4(2x+3)(2x-3)$
3) $(4x-6)(4x-6)$
4) $(4x+6)(4x+6)$

13 Which expression is equivalent to $81 - 16x^2$?
1) $(9-8x)(9+8x)$
2) $(9-8x)(9+2x)$
3) $(9-4x)(9+4x)$
4) $(9-4x)(9-4x)$

14 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

15 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

16 Factor: $x^2 - 36$

17 Factor: $9 - x^2$

18 Factor: $16x^2 - 9$

19 Factor: $9x^2 - \frac{4}{9}$

20 Factor: $3a^2 - 3$

21 Factor completely: $5n^2 - 80$

A.SSE.A.2: Factoring the Difference of Perfect Squares 1a
Answer Section

1 ANS: 3 REF: fall0706ia
2 ANS: 2 REF: 011201ia
3 ANS: 3 REF: 081008ia
4 ANS: 2 REF: 010105a
5 ANS: 2 REF: 010909ia
6 ANS: 1 REF: 080902ia
7 ANS: 3 REF: 081703ai
8 ANS: 1 REF: 011306ia
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
$36x^2 - 100 = 4(9x^2 - 25) = 4(3x + 5)(3x - 5)$

REF: 081608ai
12 ANS: 2
$16x^2 - 36 = 4(2x + 3)(2x - 3)$

REF: 011701ai
13 ANS: 3 REF: 061506ia
14 ANS: 2 REF: 081403ia
15 ANS: 2 REF: 010414a
16 ANS:
$(x + 6)(x - 6)$

REF: 019604al
17 ANS:
$-(x + 3)(x - 3)$

REF: 119404al
18 ANS:
$(4x + 3)(4x - 3)$

REF: 039404al

19 ANS:

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

REF: 089703al

20 ANS:

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

REF: 030501al

21 ANS:

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

REF: 080533a