

A.SSE.A.2: Factoring the Difference of Perfect Squares 5

1 Which expression represents $36x^2 - 100y^6$ factored completely?

1) $2(9x + 25y^3)(9x - 25y^3)$

2) $4(3x + 5y^3)(3x - 5y^3)$

3) $(6x + 10y^3)(6x - 10y^3)$

4) $(18x + 50y^3)(18x - 50y^3)$

2 Factor: $4a^2b^4 - 25x^6y^4$

3 Factor completely: $5x^2y^3 - 180y$

4 Factor: $a^4 - 5a^2b^2 + 4b^4$

5 Factor: $9a^6 - 16b^8$

6 Factor: $16a^4 - b^8$

7 Factor: $a^8 - b^8$

8 Factor: $(x + y)^4 - 1$

9 Factor: $4a^2b^2 - (a^2 + b^2 - c^2)^2$

10 Factor: $x^2 + 2xy + y^2 - 4$

11 Factor: $16x^4 + 16x^2y^2 + 16y^4$

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Answer Section

1 ANS: 2

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

REF: 081129ia

2 ANS:

$$(2ab^2 + 5x^3y^2)(2ab^2 - 5x^3y^2)$$

REF: 019405al

3 ANS:

$$5y(xy + 6)(xy - 6)$$

REF: 069813siii

4 ANS:

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

REF: 060003al

5 ANS:

$$(3a^3 + 4b^4)(3a^3 - 4b^4)$$

REF: 119304al

6 ANS:

$$(4a^2 + b^4)(2a + b^2)(2a - b^2)$$

REF: 069707al

7 ANS:

$$(a^4 + b^4)(a^2 + b^2)(a + b)(a - b)$$

REF: 010502al

8 ANS:

$$((x + y)^2 + 1)(x + y + 1)(x + y - 1)$$

REF: 039703al

9 ANS:

$$(a + b + c)(a + b - c)(a - b + c)(-a + b + c)$$

REF: 039703al

10 ANS:

$$(x + y + 2)(x + y - 2)$$

REF: 019105al

11 ANS:

$$16(x^2 + y^2 + xy)(x^2 + y^2 - xy)$$

REF: 099403al