

Name _____

Date _____ Pd. _____

Notes: Special Products Continued**Product of a Sum and a Difference**

$(a + b)(a - b) =$

*Example***Find $(5x + 3y)(5x - 3y)$.**

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

$(2p - 5s)(2p + 5s)$

$(m^2 - 5)(m^2 + 5)$

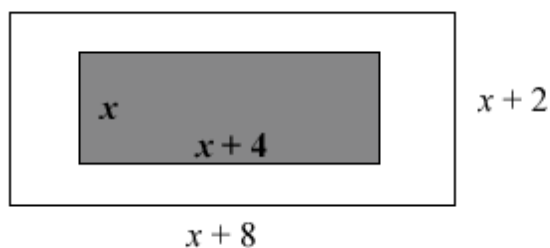
$(3x - 2y^2)(3x + 2y^2)$

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Exit Card: Special Products Continued**ECR**

Look at the picture of a rectangular swimming pool and the sidewalk surrounding the pool.



- Write an expression in simplest form that represents the area of the inside rectangle.
- Write an expression in simplest form that represents the area of the outside rectangle.
- The area of the sidewalk is the difference in the areas. Write an expression in simplest form that represents the area of the sidewalk. Use mathematics to explain how you determined your answer. Use words, symbols, or both in your explanation.

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Homework: Pages 462 – 463 (31, 32, 39 – 44, 49, 50)

31. $(x^3 + 4y)^2$

32. $(3a^2 - b^2)^2$

Pam has brown eyes and Bob has blue eyes. Brown genes B are dominant over blue genes b . A person with genes BB or Bb has brown eyes. Someone with genes bb has blue eyes. Suppose Pam's genes for eye color are Bb .

39. Write an expression for the possible eye coloring of Pam and Bob's children.

40. What is the probability that a child of Pam and Bob would have blue eyes?

Julie says that she can perform a magic trick with numbers. She asks you to pick a whole number, any whole number. Square that number. Then, add twice your original number. Next add 1. Take the square root of the result. Finally, subtract your original number. Then Julie exclaims with authority, "Your answer is 1!"

41. Pick a whole number and follow Julie's directions. Is your result 1?

42. Let a represent the whole number you chose. Then, find a polynomial representation for the first three steps of Julie's directions.

43. The polynomial you wrote in Exercise 42 is the square of what binomial sum?

44. Take the square root of the perfect square you wrote in Exercise 43, then subtract a , your original number. What is the result?

49. If $a^2 + b^2 = 40$ and $ab = 12$, find the value of $(a - b)^2$?

A 1

B 121

C 16

D 28

50. If $x - y = 10$ and $x + y = 20$, find the value of $x^2 - y^2$.

A 400

B 200

C 100

D 30