Name_____ Date _____

2.3 Practice B

In Exercises 1–9, find the product.

1. $(-6p + 3)^2$

2. $(3c - d)^2$

3. $(5x + 2y)^2$

4. $(9 + 4q)(9 - 4q)$

5. $\left(\frac{2}{3} + g\right)\left(\frac{2}{3} - g\right)$

6. $(3m + 8n)(3m - 8n)$

7. $(8 - 3u)(8 + 3u)$

8. $(-c + 9)(-c - 9)$

9. $(-3s - 7t)(-3s + 7t)$

In Exercises 10–12, use special product patterns to find the product.

10. 27^2

11. 40.5^2

12. $5\frac{1}{4} \bullet 4\frac{3}{4}$

13. Describe and correct the error in finding the product.

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

14. A circular helicopter landing pad has a radius of 200 feet. Inside the circular pad, red paint covers the outer area evenly, with a width of x feet. White paint covers the inner area.

a. Write a polynomial that represents the area of the circle that is painted white. Write your answer in terms of π.

b. Use the polynomial in part (a) to find the area of the circle that is painted white when $x = 100$.

In Exercises 15 and 16, find the product.

15. $\left(3x^2 + 7y^2\right)^2$

16. $\left(z^4 - 3w^3\right)\left(z^4 + 3w^3\right)$

17. Find k so that $25x^2 + 40x + k$ is the square of a binomial.

18. Find two numbers a and b such that $(a - b)^2 < (a + b)(a - b) < (a + b)^2$.
Find two numbers a and b such that this is not true.