

**9-3 Skills Practice: *Find Special Products of Polynomials*****Alg 1****1. Find the product of the square of the binomial.**

a.  $(x - 9)^2$

b.  $(3m + 1)^2$

c.  $(5d + 2)^2$

d.  $(3m + 7)^2$

e.  $(4p - 5)^2$

f.  $(7a - 6)^2$

g.  $(10z - 3)^2$

h.  $(2x + y)^2$

i.  $(3y - x)^2$

**2. Find the product of the sum and difference.**

a.  $(a - 9)(a + 9)$

b.  $(z - 20)(z + 20)$

c.  $(5r + 1)(5r - 1)$

d.  $(6m + 10)(6m - 10)$

e.  $(7p - 2)(7p + 2)$

f.  $(9c + 1)(9c - 1)$

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

h.  $(4 - w)(4 + w)$

i.  $(5 - 2y)(5 + 2y)$

**3. Describe how you can use mental math to find the product.**

a.  $15 \cdot 25$

b.  $43 \cdot 57$

c.  $18^2$

4. Perform the indicated operation using the function  $f(x) = 4x + 0.5$  and  $g(x) = 4x - 0.5$ .

a.  $f(x) \cdot g(x)$

b.  $(f(x))^2$

c.  $(g(x))^2$

5. In pea plants, the gene  $S$  is for spherical seed shape, and the gene  $s$  is for wrinkled seed shape. Any gene combination with an  $S$  results in a spherical seed shape. Suppose two pea plants have the same gene combination  $Ss$ .

a. Complete a Punnett square that shows the possible gene combinations of an offspring pea plant and the resulting seed shape.

b. Write a polynomial that models the possible gene combinations of an offspring pea plant.

c. What percent of the possible gene combinations of the offspring results in a wrinkled seed shape?

	$S$	$s$
$S$		
$s$		

6. You are on the basketball team and you want to figure out some statistics about foul shots. The area model shows the possible outcomes of two attempted foul shots.

a. What percent of the two possible outcomes of two attempted foul shots results in you making at least one foul shot?

b. *Explain* how you found your answer using the table.

c. Show how you could use a polynomial to model the possible results of two attempted foul shots.

	Made	Missed
Made		
Missed		