

**LESSON**  
**18-3**

# Special Products of Binomials

## Reteach

A **perfect-square trinomial** is a trinomial that is the result of squaring a binomial.

$$(a + b)^2 = a^2 + 2ab + b^2$$

Square *a*.

Square *b*.

Add the product of 2, *a*, and *b*.

$$(a - b)^2 = a^2 - 2ab + b^2$$

Square *a*.

Square *b*.

Subtract the product of 2, *a*, and *b*.

A **difference of squares** is a special product with no middle term.

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

Square *a*.

Subtract.

Square *b*.

**State whether the products will form a difference of squares or a perfect-square trinomial.**

1.  $(x + 10)(x - 10)$

2.  $(y + 6)(y + 6)$

3.  $(z - 3)(z - 3)$

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**Multiply.**

4.  $(x - 8)^2$

5.  $(x + 2)^2$

6.  $(7x - 5)^2$

\_\_\_\_\_

7.  $(x + 8)(x - 8)$

8.  $(10 + x)(10 - x)$

9.  $(5x + 2y)(5x - 2y)$

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2. No.
3.  $a = 43.41$ ,  $b = 1.26$ ;  $r = 0.95$
4.  $y = 43.41(1.26)^x$

5. Yes, 0.95 is close to a 1.
6. Increasing; the graph is rising and the value of  $b$  is  $1 + 0.26$ .
7. 276

### LESSON 16-4 Reteach

1.

	$m$	0	1	2	3	4	5	6
<b>Choice A</b>	$p$	50	$50 + 10(1) = 60$	$50 + 10(2) = 70$	80	90	100	110
<b>Choice B</b>	$p$	50	$50 \times 1.10^1 = 55$	$50 \times 1.10^2 = 60.5$	66.55	73.21	80.53	88.58

2. Choice A is better because it pays more.
3.  $p = 50 + 10(m)$ ;  $p = 50(1.10)^m$
4. A: \$160; B: \$142.66
5.  $m = 14$ ;  $p = 190$

### LESSON 17-1 Reteach

1. monomial; degree 8
2. trinomial; degree 5
3. binomial; degree 6
4.  $3y^2 + 10y$
5.  $4m^4 + 3m$
6.  $12x^5 + 18x^4$

### LESSON 17-2 Reteach

1.  $8x^2 + 9x$
2.  $m^2 - 2m + 7$
3.  $10x^3 + x^2 + 3x + 9$
4.  $3y^5 + 8y^4 - 8y^3$

### LESSON 17-3 Reteach

1.  $9x^3 - 8x$
2.  $8t^4 + 1$
3.  $-2x^3 + 4x + 4$
4.  $t^3 - t^2 - 4t - 6$
5.  $4c^5 - c^3 + 8c^2 - 7$

### LESSON 18-1 Reteach

1.  $-10x^3y^4$
2.  $-8x^3y^2z^2$
3.  $3x^3y^3$
4. 4; 4;  $4x - 20$

5.  $3x$ ;  $3x$ ;  $3x^2 + 24x$
6.  $2x$ ;  $2x$ ;  $2x$ ;  $2x^3 - 12x^2 + 6x$
7.  $5x + 45$
8.  $-4x^3 - 32x$
9.  $6x^4 + 15x^3 + 12x^2$
10.  $3x^2 - 21$
11.  $10a^4b^2$
12.  $-5y^3 + 35y^2 - 10y$

### LESSON 18-2 Reteach

1.  $x$ ; 4;  $x^2 - x - 20$
2.  $x$ ; 2;  $x^2 + 6x - 16$
3.  $x$ ; 3;  $x^2 - 9x + 18$
4.  $x^2 - 5x + 6$
5.  $x^2 - 49$
6.  $x^2 + 3x + 2$
7.  $x$ , 3;  $2x^3 + 10x^2 + 20x + 24$
8.  $x$ , 2;  $6x^3 + 16x^2 + 13x + 10$

### LESSON 18-3 Reteach

1. difference of squares
2. perfect-square trinomial
3. perfect-square trinomial
4.  $x^2 - 16x + 64$
5.  $x^2 + 4x + 4$
6.  $49x^2 - 70x + 25$
7.  $x^2 - 64$
8.  $100 - x^2$
9.  $25x^2 - 4y^2$