

**EXAMPLE 4 TAKS PRACTICE: Multiple Choice****ANOTHER WAY**

In Example 4, you can rewrite the expression  $5(n + 7) - 4(3 + n)$  as  $5(n + 7) + (-4)(3 + n)$  and then distribute  $-4$  to the terms in  $3 + n$ .

Simplify the expression  $5(n + 7) - 4(3 + n)$ .

- (A)  $6n + 23$       (B)  $n + 23$       (C)  $6n - 5$       (D)  $n - 5$

$$5(n + 7) - 4(3 + n) = 5n + 35 - 12 - 4n \quad \text{Distributive property}$$

$$= n + 23 \quad \text{Combine like terms.}$$

► The correct answer is B. (A) (B) (C) (D)

**EXAMPLE 5 TAKS REASONING: Multi-Step Problem**

**EXERCISING** Your daily workout plan involves a total of 50 minutes of running and swimming. You burn 15 calories per minute when running and 9 calories per minute when swimming. Let  $r$  be the number of minutes that you run. Find the number of calories you burn if you run for 20 minutes.

**ANOTHER WAY**

For an alternative method for solving the problem in Example 5, turn to page 102 for the **Problem Solving Workshop**.

**Solution**

The workout lasts 50 minutes, and your running time is  $r$  minutes. So, your swimming time is  $(50 - r)$  minutes.

**STEP 1** Write a verbal model. Then write an equation.

Amount burned (calories)	=	Burning rate when running (calories/minute)	•	Running time (minutes)	+	Burning rate when swimming (calories/minute)	•	Swimming time (minutes)
↓		↓		↓		↓		↓
$C$	=	$15$	•	$r$	+	$9$	•	$(50 - r)$
		$C = 15r + 9(50 - r)$						<b>Write equation.</b>
		$= 15r + 450 - 9r$						<b>Distributive property</b>
		$= 6r + 450$						<b>Combine like terms.</b>

**STEP 2** Find the value of  $C$  when  $r = 20$ .

$$C = 6r + 450 \quad \text{Write equation.}$$

$$= 6(20) + 450 = 570 \quad \text{Substitute 20 for } r. \text{ Then simplify.}$$

► You burn 570 calories if you run for 20 minutes and swim for 30 minutes.

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**GUIDED PRACTICE for Examples 4 and 5**

6. Simplify the expression  $5(6 + n) - 2(n - 2)$ .
7. **WHAT IF?** In Example 5, suppose your workout lasts 45 minutes. How many calories do you burn if you run for 20 minutes? 30 minutes?