EXAMPLE 2 TAKS PRACTICE: Multiple Choice

The table shows the lowest temperatures ever recorded in six states. Which list shows the temperatures from lowest to highest?

State	Alaska	Colorado	Florida	Montana	New York	Rhode Island
Lowest temperature	−80°F	−61°F	−2°F	−70°F	−52°F	−23°F

Ⓐ −80, −70, −52, −61, −23, −2 Ⓑ −80, −70, −2, −61, −52, −23

Ⓒ −2, −23, −52, −61, −70, −80 Ⓓ −80, −70, −61, −52, −23, −2

ELIMINATE CHOICES
The problem asks for the temperatures from lowest to highest, not from highest to lowest. So, you can eliminate choice C.

Solution

From lowest to highest, the temperatures are −80, −70, −61, −52, −23, and −2.

▶ The correct answer is D. Ⓐ Ⓑ Ⓒ Ⓓ

GUIDED PRACTICE for Examples 1 and 2

1. Graph the numbers -0.2, $\frac{7}{10}$, -1, $\sqrt{2}$, and -4 on a number line.

2. Which list shows the numbers in increasing order?

Ⓐ $-0.5, 1.5, -2, -0.75, \sqrt{7}$ Ⓑ $-0.5, -2, -0.75, 1.5, \sqrt{7}$

Ⓒ $-2, -0.75, -0.5, 1.5, \sqrt{7}$ Ⓓ $\sqrt{7}, 1.5, -0.5, -0.75, -2$

PROPERTIES OF REAL NUMBERS You learned in previous courses that when you add or multiply real numbers, there are several properties you can use.

KEY CONCEPT *For Your Notebook*

Properties of Addition and Multiplication

Let a, b, and c be real numbers.

Property	Addition	Multiplication
Closure	$a + b$ is a real number.	ab is a real number.
Commutative	$a + b = b + a$	$ab = ba$
Associative	$(a + b) + c = a + (b + c)$	$(ab)c = a(bc)$
Identity	$a + 0 = a$, $0 + a = a$	$a \cdot 1 = a$, $1 \cdot a = a$
Inverse	$a + (-a) = 0$	$a \cdot \frac{1}{a} = 1$, $a \neq 0$

The following property involves both addition and multiplication.

Distributive $a(b + c) = ab + ac$