

**LESSON** **Puzzles, Twisters & Teasers**  
**2-3 Integer Invasion!**

Subtract each pair of integers. Write the letter on the line above the correct answer at the bottom of the page to answer the following question:

What do you call a pan spinning through space?

- C  $-12 - (-2)$
- A  $-1 - 8$
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- G  $-22 - (-5)$
- D  $-4 - 21$
- Y  $27 - 19$
- E  $-10 - (-7)$
- R  $2 - 9$
- T  $-5 - 9$
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\_\_\_\_\_  
 $-9 \quad -4$

\_\_\_\_\_  
 $18 \quad -4 \quad 50 \quad -25 \quad -3 \quad -4 \quad -14 \quad 50 \quad -6 \quad 50 \quad -3 \quad -25$

\_\_\_\_\_  
 $-6 \quad -7 \quad 8 \quad 50 \quad -4 \quad -17 \quad -30 \quad -46 \quad 5 \quad -3 \quad -10 \quad -14$

**LESSON Challenge**

**2-3 Subtract-a-Fact**

Complete each temperature and elevation fact. Write the answer in the tables below.

**Temperature Facts**

- Louisiana's lowest recorded temperature is  $(-15 - 1)^\circ\text{F}$ .
- The highest recorded temperature for Texas is  $[-18 - (-138)]^\circ\text{F}$ .
- The normal January temperature for Fairbanks, Alaska, is  $(-5 - 5)^\circ\text{F}$ .
- The normal July temperature for Tampa, Florida, is  $[45 - (-37)]^\circ\text{F}$ .
- The lowest temperature of 2000 in Detroit, Michigan, was  $(87 - 90)^\circ\text{F}$ .
- The highest temperature of 2000 in Norfolk, Virginia, was  $[-42 - (-138)]^\circ\text{F}$ .
- North Carolina's lowest recorded temperature is  $(57 - 91)^\circ\text{F}$ .
- South Carolina's lowest recorded temperature is  $(-4 - 15)^\circ\text{F}$ .

**Elevation Facts**

- Death Valley's elevation is  $(-25 - 257)$  ft.
- The Caspian Sea's elevation is  $(125 - 217)$  ft.
- Mount Everest's elevation is  $[-26 - (-29,061)]$  ft.
- Mount McKinley's elevation is Mount Everest's elevation  $- 8,715$  ft.
- Lake Eyre's elevation is  $(68 - 120)$  ft.
- The Dead Sea's elevation is  $(-761 - 587)$  ft.
- Mount Elbrus's elevation is  $[11,500 - (-7,010)]$  ft.
- Lake Assal's elevation is  $(-254 - 258)$  ft.

Temperature Facts	$^\circ\text{F}$
Louisiana's lowest	$-16^\circ$
Texas's highest	$120^\circ$
Fairbanks normal January	$-10^\circ$
Tampa normal July	$82^\circ$
Lowest in Detroit in 2000	$-3^\circ$
Highest in Norfolk in 2000	$96^\circ$
North Carolina's lowest	$-34^\circ$
South Carolina's lowest	$-19^\circ$

Highest and Lowest Points on Continents	Elevation
Death Valley, North America	$-282$ ft
Caspian Sea, Europe	$-92$ ft
Mount Everest, Asia	$29,035$ ft
Mount McKinley, North America	$20,320$ ft
Lake Eyre, Australia	$-52$ ft
Dead Sea, Asia	$-1,348$ ft
Mount Elbrus, Europe	$18,510$ ft
Lake Assal, Africa	$-512$ ft

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**LESSON Problem Solving**

**2-3 Subtracting Integers**

Write the correct answer.

- The daytime temperature on Mercury can reach  $430^\circ\text{C}$ . The nighttime temperature can drop to  $-180^\circ\text{C}$ . How much can the temperature drop during one day?  
 $610^\circ\text{C}$
- A small business reported a net loss of  $\$86,000$  in 2004 and a net profit of  $\$32,000$  in 2005. How much did the company's profits change from 2004 to 2005?  
 $\$118,000$
- An ice cream company reported a net profit of  $\$24,000$  in 2002 and a net loss of  $\$11,000$  in 2003. How much did the company's profits change from 2002 to 2003?  
 $\$35,000$
- The daytime high temperature on the Moon can reach  $130^\circ\text{C}$ . At night, the temperature can drop to  $-110^\circ\text{C}$ . What is the difference between the high and low temperatures?  
 $240^\circ\text{C}$
- On Wednesday night in St. Petersburg, Russia, the temperature is  $-11^\circ\text{C}$ . On the same night in Bombay, India, the temperature is  $17^\circ\text{C}$ . What is the difference in temperature?  
A  $10,630$  meters  
B  $-11,520$  meters  
C  $-9,740$  meters  
D  $9,740$  meters
- The low point of the Tonga Trench, in the Pacific Ocean, is  $-10,630$  meters. The low point of the Mariana Trench, also in the Pacific Ocean, is  $890$  meters lower. What is the depth of the Mariana Trench?  
A  $-185$  feet  
B  $11,375$  feet  
C  $11,560$  feet  
D  $11,745$  feet
- Climax, Colorado, is the highest town in the United States at  $11,560$  feet. The lowest town is Calipatria, California, which is  $185$  feet below sea level. What is the difference in elevation?  
A  $-185$  feet  
B  $11,375$  feet  
C  $11,560$  feet  
D  $11,745$  feet
- The low point of the Japanese Trench, in the Pacific Ocean, is  $-10,372$  meters. The low point of the Puerto Rico Trench, in the Atlantic Ocean, is  $1,172$  meters higher. What is the depth of the Puerto Rico Trench?  
F  $-6^\circ\text{C}$   
G  $50^\circ\text{C}$   
H  $-187^\circ\text{C}$   
J  $28^\circ\text{C}$   
F  $-9,200$  meters  
G  $8,200$  meters  
H  $-1,172$  meters  
J  $-11,544$  meters

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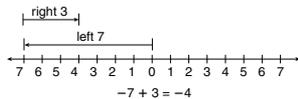
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**LESSON Reading Strategies**

**2-3 Use Graphic Aids**

Brett borrowed  $\$7$  from his father to buy a CD. He paid back  $\$3$ . How much money does Brett have now? The number line will help you picture this problem.

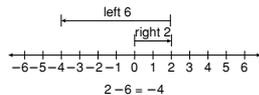


- Beginning at 0, in which direction will you move first? to the left
- How many places? 7
- Which direction do you move next? to the right
- How many places? 3
- On what number do you end? -4

Bret does not have any money. He owes his dad  $\$4$ . He has negative  $\$4$ .

Sally and her friends made up a game with points. You can either win or lose up to ten points on each round of the game. After the first round, Sally's team had 2 points. In the second round they lost 6 points. How many points was Sally's team down by after the second round?

The number line will help you picture the problem.



- Beginning at zero, which direction will you move first? How many places?  
to the right; 2
- Which direction will you move next? How many places?  
to the left; 6
- By how many points was Sally's team down? 4

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<u>A</u>	<u>N</u>																		
-9	-4																		
<u>U</u>	<u>N</u>	<u>I</u>	<u>D</u>	<u>E</u>	<u>N</u>	<u>T</u>	<u>I</u>	<u>F</u>	<u>I</u>	<u>E</u>	<u>D</u>								
18	-4	50	-25	-3	-4	-14	50	-6	50	-3	-25								
<u>F</u>	<u>R</u>	<u>Y</u>	<u>I</u>	<u>N</u>	<u>G</u>			<u>O</u>	<u>B</u>	<u>J</u>	<u>E</u>	<u>C</u>	<u>T</u>						
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