

LESSON
2-2

Problem Solving

Adding Integers

Write the correct answer.

1. The temperature dropped 12°F in 8 hours. If the final temperature was -7°F , what was the starting temperature?

2. At 3 P.M., the temperature was 9°F . By 11 P.M., it had dropped 31°F . What was the temperature at 11 P.M.?

3. Tad owes John \$23 and borrows \$12 more. How much does Tad owe John now?

4. New Orleans, Louisiana, is 6 feet below sea level. The highest point in Louisiana, Driskill Mountain, is 541 feet higher than New Orleans. How high is Driskill Mountain?

5. A submarine submerged at a depth of -40 ft dives 57 ft more. What is the new depth of the submarine?

6. An airplane at 20,000 ft drops 2,500 ft in altitude. What is the new altitude?

Choose the letter for the best answer.

7. Last week, Jane made deposits of \$64, \$25, and \$37 into her checking account. She then wrote checks for \$52 and \$49. What is the overall change in Jane's account balance?
A $-\$99$ C $\$126$
B $\$25$ D $\$227$
8. In Indianapolis, Indiana, the coldest recorded temperature was -23°F . The hottest recorded temperature was 127°F higher. What was the hottest temperature in Indianapolis?
F 150°F H 104°F
G 127°F J -150°F
9. Helena borrowed \$189 from her parents to buy an electric bass. She paid back \$56 last week and \$64 this week. How much does Helena still owe her parents?
A $\$133$ C $\$69$
B $\$120$ D $\$29$
10. The Aral Sea and the Caspian Sea are actually lakes. The elevation of the Caspian Sea is 92 feet below sea level. The Aral Sea is 217 feet higher. What is the elevation of the Aral Sea?
E -125 ft H 309 ft
G -309 ft J 125 ft

LESSON

Problem Solving

2-3

Subtracting Integers

Write the correct answer.

1. The daytime temperature on Mercury can reach $430\text{ }^{\circ}\text{C}$. The nighttime temperature can drop to $-180\text{ }^{\circ}\text{C}$. How much can the temperature drop during one day?

2. 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?

3. 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?

4. The daytime high temperature on the Moon can reach $130\text{ }^{\circ}\text{C}$. At night, the temperature can drop to $-110\text{ }^{\circ}\text{C}$. What is the difference between the high and low temperatures?

Choose the letter for the best answer.

5. 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 $10,630$ meters
B $-11,520$ meters
C $-9,740$ meters
D $9,740$ meters
6. On Wednesday night in St. Petersburg, Russia, the temperature is $-11\text{ }^{\circ}\text{C}$. On the same night in Bombay, India, the temperature is $17\text{ }^{\circ}\text{C}$. What is the difference in temperature?
F $-6\text{ }^{\circ}\text{C}$
G $50\text{ }^{\circ}\text{C}$
H $-187\text{ }^{\circ}\text{C}$
J $28\text{ }^{\circ}\text{C}$
7. 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
8. 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 $-9,200$ meters
G $8,200$ meters
H $-1,172$ meters
J $-11,544$ meters