

Integer Subtraction Review

Find the difference.

- | | | |
|-----------------|-----------------|-----------------|
| 1. $-16 - 7$ | 2. $14 - (-17)$ | 3. $11 - 28$ |
| 4. $30 - 12$ | 5. $5 - (-5)$ | 6. $-4 - (-34)$ |
| 7. $-63 - (-9)$ | 8. $-44 - 35$ | 9. $52 - (-79)$ |

Evaluate the expression when $a = 5$ and $b = -14$.

- | | | |
|-------------|-------------|------------------|
| 10. $b - a$ | 11. $a - b$ | 12. $12 - b + a$ |
|-------------|-------------|------------------|

Use mental math to solve the equation.

- | | | |
|------------------|--------------------|--------------------|
| 13. $6 - a = 11$ | 14. $-3 - x = -14$ | 15. $-12 - c = 24$ |
|------------------|--------------------|--------------------|

Evaluate the expression.

- | | | |
|---------------------|---------------------|------------------------|
| 16. $-3 - (-4) + 5$ | 17. $4 - 8 - (-16)$ | 18. $-17 + 15 - (-12)$ |
|---------------------|---------------------|------------------------|

Tell whether the statement is *true* or *false*.

19. The difference of a positive integer and a negative integer is always positive.
20. The difference of a negative integer and a negative integer is always negative.
21. The difference of a negative integer and a positive integer is sometimes positive.
22. The highest point in California is Mount Whitney at 14,494 feet above sea level. The lowest point in California is Death Valley at 282 feet below sea level. What is the difference in the elevations?
23. A temperature expressed using Kelvin (K) units can be converted to degrees Celsius ($^{\circ}\text{C}$) by subtracting 273. Convert the boiling points of the gases given in the table from Kelvin to degrees Celsius.

Gas	Boiling Point
Argon	87 K
Helium	4 K
Krypton	120 K
Neon	27 K

24. The temperature at 6 P.M. was 8°F . Three hours later the temperature was -11°F . What was the change in temperature?

LESSON
2-3**Problem Solving****Subtracting Integers**

Write the correct answer.

1. The daytime temperature on Mercury can reach 430°C . The nighttime temperature can drop to -180°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°C . At night, the temperature can drop to -110°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°C . On the same night in Bombay, India, the temperature is 17°C . What is the difference in temperature?
F -6°C
G 50°C
H -187°C
J 28°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