Name: _____ Section: _____

Date : _____ Score: _____

Addition and Subtraction of Integers

Example:

> What change in temperature does a worker experience in a grocery when he goes from a vegetable section at 4°C to the meat section with a temperature of -1°C?
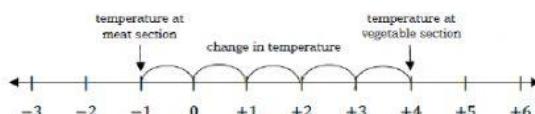
Understand: What is asked? The change of temperature in two different sections in a grocery.

What are the given facts? Vegetable section has a temperature of 4°C and meat section has -1°C

Plan:

■ ■ ■ ■   + 4
□   - 1

> (+4) - (-1) = (get the additive inverse)
> (+4) + (+1) = +5 or 5

Check:

To check if our answer is correct, we may use a number line.

temperature at meat section
change in temperature
temperature at vegetable section

−3 −2 −1 0 +1 +2 +3 +4 +5 +6

Rules in Addition of Integers

1. If the addends have the <u>same sign</u>, the numbers are added, and the common sign is affixed to the sum.

Ex: a. ● ● ● ● ● ● ● $(+7)$

b. ○ ○ ○ ○ ○ (- 4)
                        + (- 3)

+ ● ● ● ●   + (+4)   -7
                    + 11

c. (+45) + (+23) = 78   d. (- 57) + (- 25) = - 82

2. If the addends have <u>different sign</u>, the signs are first disregarded and the difference between the numbers is obtained. The sign of the greater number is affixed to the answer.

Ex: a. ● ● ● ○ ○ ○ (+ 5)

b. . (+ 89) + (- 34) = + 55

+ (-3)
+ 2

c. (- 94) + (+ 43) = - 51

Rules: Subtraction of Integers

1. If the numbers have the same sign, subtract the numbers, and affix the common sign
2. If the numbers have different signs, add the additive inverse of the subtrahend to the minuend.

a. ■ ■ ■ ■ □   (+ 5)

b. ■ ■ ■ ■   (+4)

-           □ □   - (- 2)   -   ■ ■ ■   - (+3)
                          + 3   + 1

c. 17 − 5 = 17 + (−5) = 12   d. -43 − (−18) = -43 + 18 = -25

Activity 1

DIRECTION: Perform the indicated operation.

1. (+10) + (-9)   =
2. (+25) + (+5)   =
3. (-18) + (+6)   =
4. (+12) + (-20) =
5. (-6) + (-4)   =

Activity 2

DIRECTION: Perform the indicated operation.

1. (+120) - (-19) =
2. (-35) - (+5)   =
3. (-60) - (-129) =
4. (-45) - (+30)   =
5. The temperature in Baguio City was 12 °Celsius in the morning. It dropped to 8°Celsius in the evening. What is the difference between these temperatures?

Activity 3
DIRECTION
Read and understand the problem.
1. The temperature in Baguio City was 12°C in the morning it dropped to 8°C in the evening. What is the between these temperature?
 What is the operation to be used?_____
 What is the answer? _____

2. At the beginning John has 25 cards, he then gave 11 cards to his friends. His cousin came over and gave him 17 cards. His uncle also came and gave him 18 cards. How many cards does he have now?
What is asked? _____
What is the answer? _____

3. Bea gets on the elevator on eleventh floor, the elevator goes down 2 floors then stops. It then continues to go down 4 more floors where Bea got. In what floor did she get off the elevator?
What is the mathematical sentence? _____
What is the answer? _____

Activity 4
DIRECTION
Solve each problem and choose the letter of the correct answer.
1. What is the sum of -9 and -3?
  A. -12   B. 27   C. -27   D. 12
2. Find the sum of 18 and -29.
  A. -47   B. 47   C. -11   D. 11
3. The difference of -76 and -45 is _____.
  A. -31   B. 31   C. -39   D. 29
4. What is the sum of two opposite integers?
  A. -2   B. 2   C. 1   D. 0
5. During summer, Jake weighed 65 kg. When he came back to school, he realized that he lost 3 kg. He lost another 2 kg in December. What was his weight in December?
  A. 70 kg   B. 55 kg   C. 60 kg   D. 66 kg
6. A diver drops out of an airplane 20 feet above sea level and dives into the ocean going 8 feet below sea level. How far did he travel?
  A. 12 ft.   B. 28 ft.   C. 160 ft.   D. 20 ft.
7. Mr. Cruz went to market to buy some fruits and vegetables. He bought 5 apples at ₱ 30.00 each and 3 cabbages at ₱ 10.00 each. He gave the vendor a ₱500bill. How much change did he get?
  A. ₱ 320.00   B. ₱ 180.00   C. ₱ 220.00   D ₱ 460.00
8. Clara and her family are vacationing in the Netherlands. They began a tour of the North Sea coastline at an elevation of −8 feet. By the end of the tour, their elevation had decreased by 5 feet. What was their elevation at the end of the tour?
A. -3 feet   B. 13 feet   C. -13 feet   D. 3 feet
9. Bryant was playing the video game *Ship, Ship Ahoy!* He began Level 2 with 15 points but soon got −6 points because his character fell overboard. What is Bryant's total score now?
A. 9 points   B. 21 points   C. -9 points   D. – 21 points
10. Connor is playing a card game called *At Face Value.* At the end of each round, players earn positive points for their remaining number cards but negative points for their face cards. At the end of round 1, Connor earns −5 points. At the end of round 2, he earns −6 points. What is Connor's score now?
A. -11 points   B. 11 points   C. – 1 point   D. + 1 point

Quarter 2, Week 7 Competency: describes and interprets the basic operations on integers using materials such as algebra tiles, counters, chips, and cards._M6NS-IIh-155
    : **performs** addition/subtraction of integers with like signs.
    : performs addition/subtraction of integers with unlike signs
    : solves routine and non routine problems involving addition/subtraction of integers using appropriate strategies and tools.

Reference: https://www.ixl.com/math/grade-7/add-and-subtract-integers-word-problems

LIVEWORKSHEETS