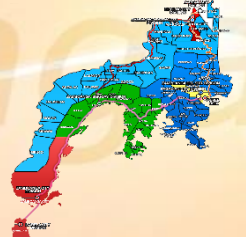




Republic of the Philippines
Department of Education
 Regional Office IX, Zamboanga Peninsula



6



Zest for Progress
 Zeal of Partnership

MATHEMATICS

Quarter 2 – Module 8:

Concepts on Integers



Name of Learner: _____

Grade & Section: _____

Name of School: _____

- JANUARY**
Makugiton
- FEBRUARY**
Mahigugmaon
- MARCH**
Matinabungan
- APRIL**
Matinahunon
- MAY**
Makapsay og Matimpyo
- JUNE**
*Maabtik og Musunod sa
Ishuklong Oras*
- JULY**
Maantigo og Maabilidad
- AUGUST**
*Maginhuhunaon
para sa Urban*
- SEPTEMBER**
Madaginton
- OCTOBER**
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- DECEMBER**
Maalampon

Mathematics – Grade 6
Alternative Delivery Mode
Quarter 2 – Module 8: Concepts on Integers
First Edition, 2020

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What I Need to Know

This module was designed and written with you in mind. It is here to help you master the Comparing and Arranging Integers on the Number line and Describing and Interpreting the Basic Operations on Integers using materials such as Algebra tiles counters, chips and cards. The scope of this module permits it to be used in many different learning situations. The language used recognizes the diverse vocabulary level of students. The lessons are arranged to follow the standard sequence of the course. But the order in which you read them can be changed to correspond with the textbook you are now using.

The module has two lessons, namely:

- Compare and Arrange Integers on the Number line.
- Describe and Interpret the Basic Operations on Integers using materials such as Algebra tiles counters, chips and cards.(M6NS-IIh-155)

After going through this module, you are expected to:

Compare and Arrange Integers on the Number line.

Describe and Interpret the Basic Operations on Integers using materials such as Algebra tiles counters, chips and cards.

Lessons

1-2

Comparing and Arranging Integers on the Number line and Describing and Interpreting the Basic Operations on Integers using materials such as Algebra tiles counters, chips and cards



What's In

A. In each pair of integers, encircle the number located in the right of a number line.

1. 3, -8

2. 8, -6

3. 18, -12



What's New

A Meteorologist recorded temperatures in four cities around the world. List these cities in order from least to greatest according to their temperature.

| City | Temperature |
|-----------|-------------|
| Albany | +5° |
| Anchorage | -6° |
| Buffalo | -7° |
| Juneau | -9° |
| Reno | +12° |

Since the temperatures are given as integers, a number line will help us solve the problem. As you go on to the right of the number line, integers get larger in value. As you move to the left, integers get smaller in value.



What is It

Integers consist of negative integers, zero and positive integers. They can be represented on the number line. On a number line, the positive numbers are to the right of zero and the negative numbers are on its left.

An integer on the number line is greater than the number on its left and less than the numbers on its right.

When comparing integers, it is helpful to draw a number line.

| Integers | Comparison | Explanation |
|----------|------------|---|
| +7, -2 | $+7 > -2$ | +7 is farther to the right on the number line than 2 |
| -9, 0 | $-9 < 0$ | -9 is farther to the left on the number line than 0 |
| +8, +1 | $+8 > +1$ | +8 is farther to the right on the number line than +1 |

Example:

-1 is greater than -2 and less than 0.

We can also write it as $-1 > -2$ and $-1 < 0$.

Recall that “>” means greater than and “<” means less than.

This means that all the integers on the number line are arranged in **ascending order** from left to right.

On the number line, moving to the right is positive.



What's More

Activity 1: Use a number line to describe the integer below.

5 units right of 6

Activity 2: Illustrate the following in the number line using algebra tiles, counters, chips and cards.

The set of integers greater than -3 and less than 2

Activity 3: Arrange the following in increasing/ ascending order through a number line.

3, -5, 10, -12, 7, 15, -25, 0



What I Have Learned

Integers consist of zero, negative and positive numbers. In a number line, integers are arranged in ascending order from left to right. Negative numbers are found at the left of zero. While positive numbers are located to the right of zero. An integer on the number line is greater than the number on its left and less than the numbers on its right. Zero is always greater any of the negative numbers since they are located to the left of it. All positive integers are always greater than zero.



What I Can Do

1. Put the integers in order from least to greatest -2, 3, 7, -9

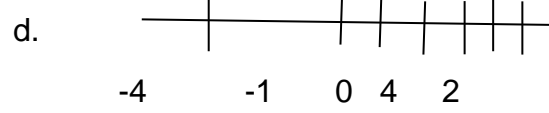
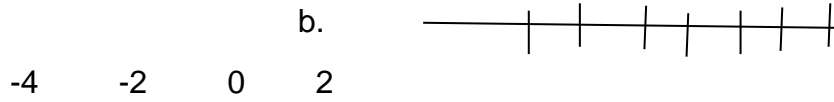
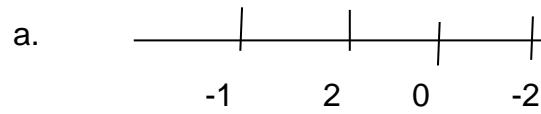
a. 3, 7, -2, -9

b. -9, -2, 3, 7

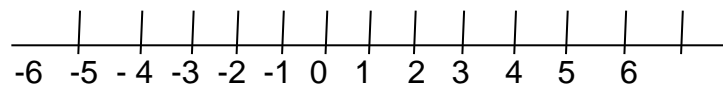
c. -2, -9, 3, 7

d. 7, 3, -2, -9

2. Which number line is set up correctly



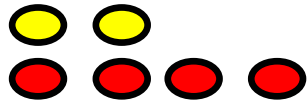
3. Solve $4 + (-5) =$



Assessment

Select the letter of the correct answer.

1. Which addition equation matches the problem modelled below?

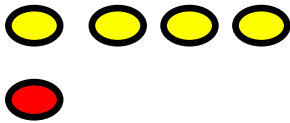


Note: Red is negative

Yellow is positive

- A. $-2 + (-4) = -6$
- B. $2 + (-4) = -2$
- C. $4+2 = 6$
- D. $4 + (-2) = 2$

2.



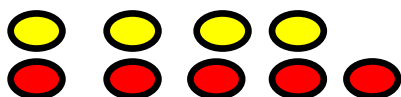
Which equation represents the 2 colors counters shown in the image?

Note: Red is negative

Yellow is positive

- A. $4 + 1 = 5$
- B. $4 + (-1) = 5$
- C. $4 + (-1) = 3$
- D. $-4 + 1 = -3$

3.



Note: Red is negative

Yellow is positive

A. $4 + (-5) = -1$

B. $4+5 = -9$

C. $4+ -5 = 9$

D. $4+ 5 = 1$

4. What is additive inverse (zero pairs)

A. When opposite is added together their sum is equal to zero.

B. When you add any two number together the two color counters is negative

C. The distance a number is from a zero.

D. None of the above

5. Find the sum of $-8 + 3$.

A. -11

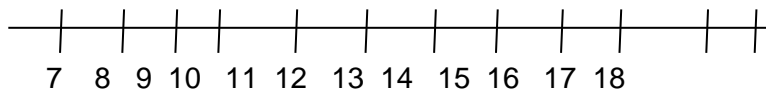
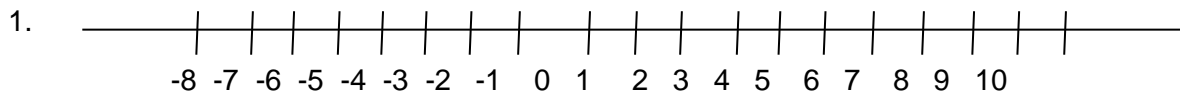
B. -5

C. 5

D. 11

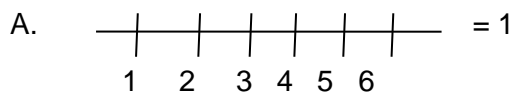
Answer Key

What Is In



What's more

Activity 1



Activity 2

1. -2, -1, 0, 1

Activity 3

1. 29, 18, 16, 0, -4, -8, -16

What I Can Do

1. B
2. A
4. -1

Assessment

1. B. $2 + (-4) = -6$
2. C. $4 + (-1) = 3$
3. A.
4. $4 + (-5) = -1$
4. A
5. 5. B (-5)

References:

Burgus, J. R., Dimaranan, A. S., Perez. M.H., Placer D.P., (2016). 21ST Century Mathletes. Quezon City Philippines: Vibal Group, Inc.

I AM A FILIPINO

by Carlos P. Romulo

I am a Filipino – inheritor of a glorious past, hostage to the uncertain future. As such, I must prove equal to a two-fold task – the task of meeting my responsibility to the past, and the task of performing my obligation to the future.

I am sprung from a hardy race – child many generations removed of ancient Malayan pioneers. Across the centuries, the memory comes rushing back to me: of brown-skinned men putting out to sea in ships that were as frail as their hearts were stout. Over the sea I see them come, borne upon the billowing wave and the whistling wind, carried upon the mighty swell of hope – hope in the free abundance of the new land that was to be their home and their children's forever.

This is the land they sought and found. Every inch of shore that their eyes first set upon, every hill and mountain that beckoned to them with a green and purple invitation, every mile of rolling plain that their view encompassed, every river and lake that promised a plentiful living and the fruitfulness of commerce, is a hollowed spot to me.

By the strength of their hearts and hands, by every right of law, human and divine, this land and all the appurtenances thereof – the black and fertile soil, the seas and lakes and rivers teeming with fish, the forests with their inexhaustible wealth in wild and timber, the mountains with their bowels swollen with minerals – the whole of this rich and happy land has been for centuries without number, the land of my fathers. This land I received in trust from them, and in trust will pass it to my children, and so on until the world is no more.

I am a Filipino. In my blood runs the immortal seed of heroes – seed that flowered down the centuries in deeds of courage and defiance. In my veins yet pulses the same hot blood that sent Lapulapu to battle against the alien foe, that drove Diego Silang and Dagohoy into rebellion against the foreign oppressor.

That seed is immortal. It is the self-same seed that flowered in the heart of Jose Rizal that morning in Bagumbayan when a volley of shots put an end to all that was mortal of him and made his spirit deathless forever; the same that flowered in the hearts of Bonifacio in Balintawak, of Gregorio del Pilar at Tirad Pass, of Antonio Luna at Calumpit, that bloomed in flowers of frustration in the sad heart of Emilio Aguinaldo at Palanan, and yet burst forth royally again in the proud heart of Manuel L. Quezon when he stood at last on the threshold of ancient Malacanang Palace, in the symbolic act of possession and racial vindication. The seed I bear within me is an immortal seed.

It is the mark of my manhood, the symbol of my dignity as a human being. Like the seeds that were once buried in the tomb of Tutankhamen many thousands of years ago, it shall grow and flower and bear fruit again. It is the insigne of my race, and my generation is but a stage in the unending search of my people for freedom and happiness.

I am a Filipino, child of the marriage of the East and the West. The East, with its languor and mysticism, its passivity and endurance, was my mother, and my sire was the West that came thundering across the seas with the Cross and Sword and the Machine. I am of the East, an eager participant in its struggles for liberation from the imperialist yoke. But I know also that the East must awake from its centuried sleep, shake off the lethargy that has bound its limbs, and start moving where destiny awaits.

For I, too, am of the West, and the vigorous peoples of the West have destroyed forever the peace and quiet that once were ours. I can no longer live, a being apart from those whose world now trembles to the roar of bomb and cannon shot. For no man and no nation is an island, but a part of the main, and there is no longer any East and West – only individuals and nations making those momentous choices that are the hinges upon which history revolves. At the vanguard of progress in this part of the world I stand – a forlorn figure in the eyes of some, but not one defeated and lost. For through the thick, interlacing branches of habit and custom above me I have seen the light of the sun, and I know that it is good. I have seen the light of justice and equality and freedom, my heart has been lifted by the vision of democracy, and I shall not rest until my land and my people shall have been blessed by these, beyond the power of any man or nation to subvert or destroy.

I am a Filipino, and this is my inheritance. What pledge shall I give that I may prove worthy of my inheritance? I shall give the pledge that has come ringing down the corridors of the centuries, and it shall be compounded of the joyous cries of my Malayan forebears when first they saw the contours of this land loom before their eyes, of the battle cries that have resounded in every field of combat from Mactan to Tirad Pass, of the voices of my people when they sing:

"I am a Filipino born to freedom, and I shall not rest until freedom shall have been added unto my inheritance—for myself and my children and my children's children—forever."