Helping With Math

Understanding Positive and Negative Integers

GRADE 6

Positive and negative integers or numbers only differ in signs. The positive integer has a plus sign or it simply has no sign. On the other hand, the negative integer has a minus sign before the number.
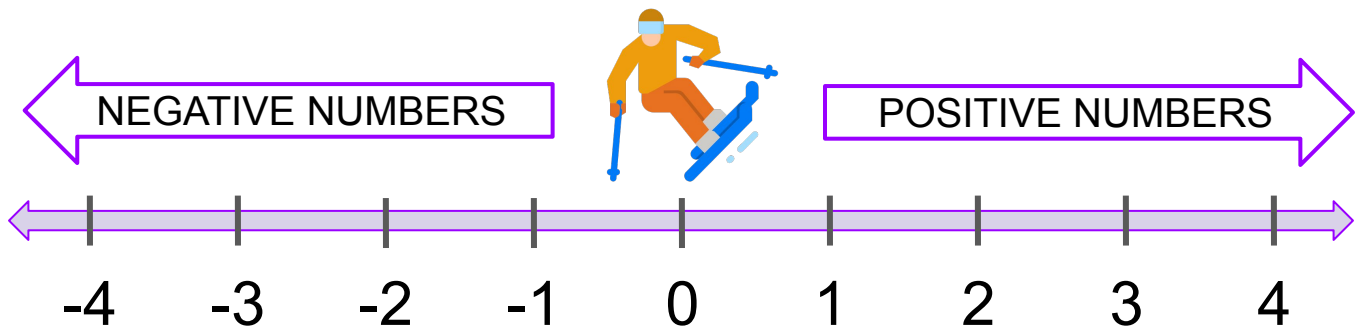
Positive and negative integers are not just used in simple math operations, it can also be used in real-life situations. The temperature is one of the applications of the lesson.

POSITIVE AND NEGATIVE INTEGERS

NEGATIVE NUMBERS

POSITIVE NUMBERS

-4 -3 -2 -1 0 1 2 3 4

Zero is neither positive nor negative.

- A number is **positive** if the number is above zero.
- Positive numbers are written with no sign or a "+" sign in front of them.
- They are counted up from zero to the right on a number line.

- A number is **negative** if the number is below zero.
- Negative numbers are always written with a "-" sign in front of them.
- They are counted down from zero to the left on a number line.

Tip: Always look at the sign in front of a number to see if it is positive or negative.

Positive numbers get higher the further we move to the right, so 5 is more than 2. Negative numbers get lower the further we move to the left, so -5 is less than -2.

- Positive and negative numbers are used together to describe quantities having opposite directions or values (e.g.,temperature above/below zero,elevation above/below sea level, credits/debits, positive/negative electric charge)
- Positive and negative numbers are used to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.

The temperature at 3:00 PM was 15 degrees. At midnight the temperature was -2 degrees. What's the difference between those two temperatures?

➢ As you can see in the real life situation above, there is a presence of a positive integer (15 degrees) and a negative integer (-2 degrees).

➢ To solve this, just simply count the distance of the higher value or number from the lower value. In this case: 15 is 15 units from zero and -2 is two units from zero. Thus, the total distance is 17 units. **The difference of the two temperature is 17 degrees.**

TRY THIS!

The town of Central Valley is at an elevation of 2,900 feet above sea level. North Valley has an elevation of 282 feet below sea level. What is the difference in elevation of these two towns?
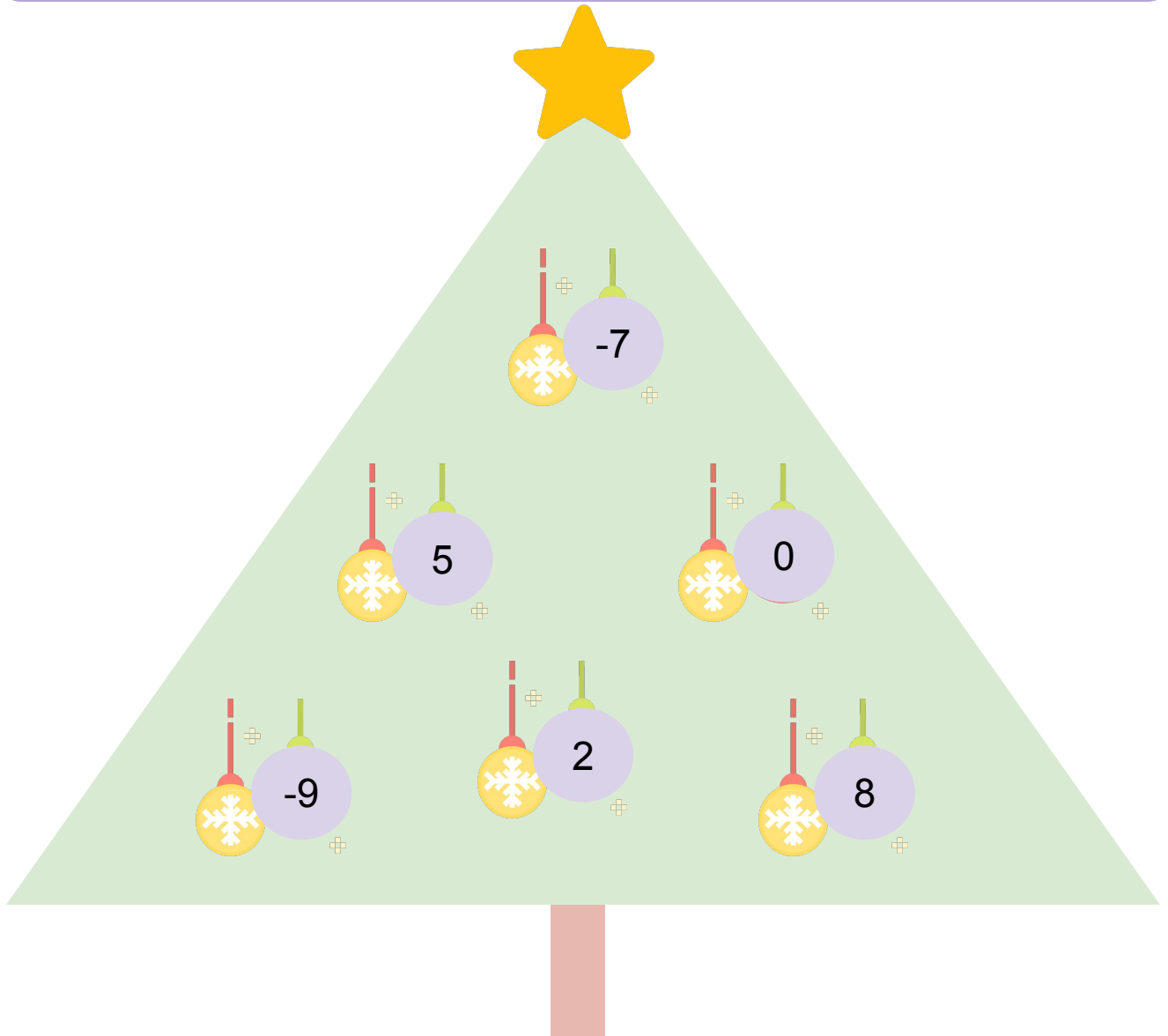
TABLE OF ACTIVITIES

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CHRISTMAS BALLS

Arrange and decor your Christmas tree with balls! Arrange the integers written in Christmas balls from least to greatest. Write it under the Christmas tree.
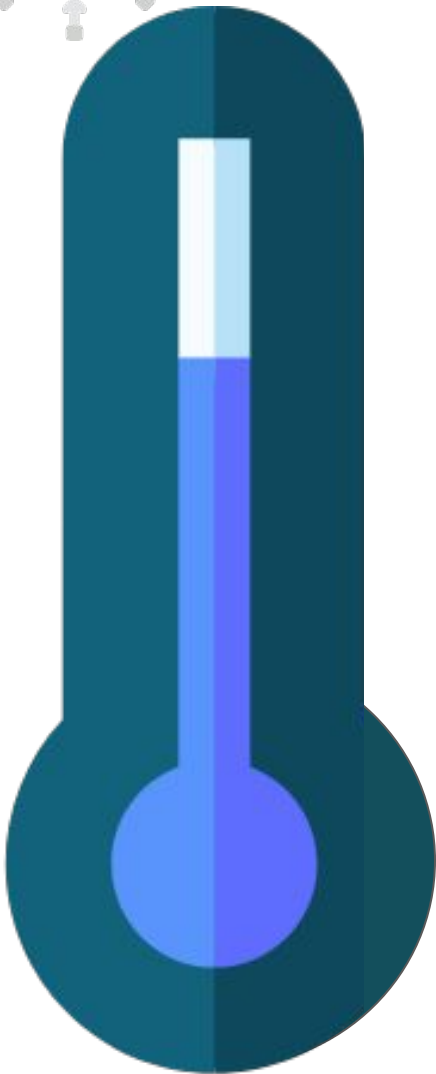
-7

5

0

-9

2

8

THERMOMETER

Identify if the temperature is high or low. Identify if the word "higher" or "lower" will correctly fit in the given below. Write the appropriate word at the space in the middle.

1.) -7 is _____ than -9

2.) 5 is _____ than -5

3.) 0 is _____ than -1

4.) -6 is _____ than -8

5.) -3 is _____ than -2

SANTA'S WISH

Fulfill Santa's wish by identifying the integers that are needed in the given. Write your answer on the space provided below each statement.

1.) Give me 3 positive even numbers.

2.) Give me 4 negative integers that are divisible by 5.

3.) Give me a positive and a negative odd numbers.

4.) Give me 5 mixed integers that are greater than 50. Arrange it from greatest to least.

WINTER PRESENTS

Choose the correct answer from the given choices under each statement. Draw a simple gift box on the letter of your answer. Note: square shape and a ribbon above it will do.

1.) Which number is the greatest?

a. 20   b. -100   c. -45   d. 50

2.) Which integer represents this scenario: loss of 9 dollars

a. 9   b. 0   c. -9   d. -0

3.) Integers that are less than zero are called _____ numbers.

a. positive   b. negative   c. equal

4.) Integers that are greater than zero are called _____ numbers.

a. positive   b. negative   c. equal

GINGERBREAD

Identify if the gingerbread cookies are fully baked or not! Write True if the statement is correct. Otherwise, write False.

_____ 1.) These integers are in order from least to greatest.
-38, -24, 19, -10, 3

_____ 2.) These integers are in order from greatest to least.
25, 11, -8, -7, -15

_____ 3.) These integers are in order from greatest to least.
90, 9, 0, −90, −9

_____ 4.) $-13 < -5$.

_____ 5.) Integers include both positive and negative whole numbers with 0.

TRIP TO ALASKA

Help Philip experience the winter season. Answer the following word problems and show your complete solution.

4.The Alaska's temperature at 3:00 PM was 15 degrees. At midnight the temperature was -2 degrees. What's the difference between those two temperatures?

3.The town of Sloan is at an elevation of 2,586 feet above sea level. Meanwhile, the town of Robbins has an elevation of 282 feet below sea level. What is the difference in elevation of these two towns?

2.In a card game, Cristina had 27 points and April had -4 points. What's the difference between their scores?

1.If the temperature in Alaska drops 35 degrees Fahrenheit it will be -10 degrees Fahrenheit. What is the current temperature in Alaska?

CHRISTMAS CARD

Read the Christmas card that your friends gave! Read and understand each word problem. Solve what is asked and show your solution. *Note: the temperature unit is Celsius.*

PLACE	TEMPERATURE
Canberra	17
Bombay	30
McMurdo	-16
Ottawa	4
Nabesna	-13
Cedarhurst	12

1.How much colder is McMurdo than Nabesna?

2.How much warmer is Bombay than Ottawa?

3.How much colder is Nabesna than Canberra?

4.What is the difference between the warmest and coldest place?

5.Arrange the temperature from coldest to warmest.

WINTER CLOTHES

Avail the sale winter clothes by answering the word problems below. Show your solution.
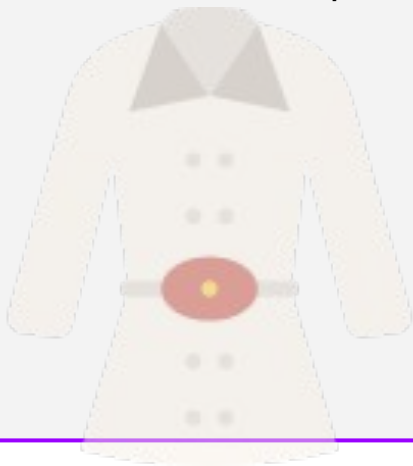
1.In Buffalo, the temperature was -14°F in the morning. If the temperature dropped 7°F, what is the temperature now?
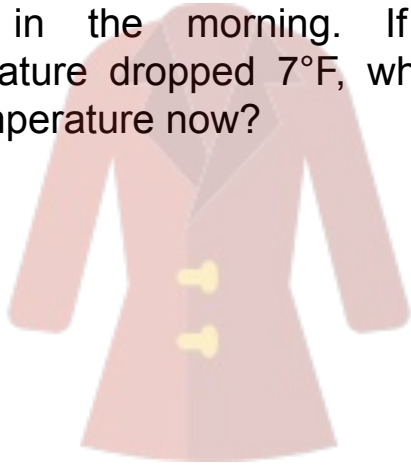
2.A submarine was situated 800 feet below sea level. If it ascends 250 feet, what is its new position?

3.A submarine was situated 450 feet below sea level. If it descends 300 feet, what is its new position?

4.Mt. Everest, the highest elevation in Asia, is 29,028 feet above sea level. The Dead Sea, the lowest elevation, is 1,312 feet below sea level. What is the difference between these two elevations?
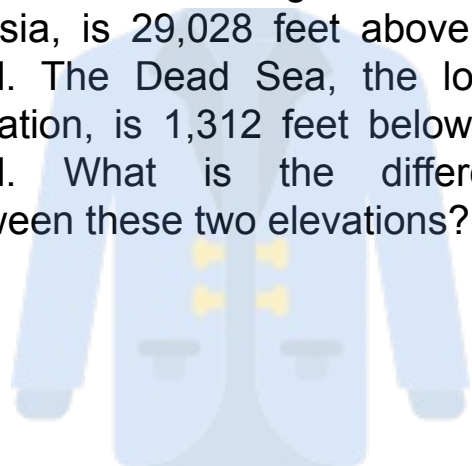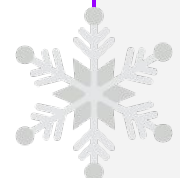
SNOWFLAKES

Keep being educated with the different snowflakes just like familiarizing yourself with the positive and negative integers! Provide your own given set of integers then arrange them from least to greatest and greatest to least.

LEAST TO GREATEST   GREATEST TO LEAST

CHRISTMAS LETTER

Write your personal experience this season! Answer the question in not less than 4 sentences.

What is the importance of learning the positive and negative integers? How can you apply the concept in real-life?

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

ANSWER GUIDE

Activity 1

-9, -7, 0, 2, 5, 8

Activity 2

1. Higher
2. Higher
3. Higher
4. Higher
5. Lower

Activity 3

Answers may vary.

Activity 4

1. D.
2. C.
3. B.
4. A.

Activity 5

1. False
2. False
3. False
4. True
5. True

Activity 6

1. 25 degrees
2. 31 points
3. 2, 868 feet
4. 17 degrees

ANSWER GUIDE

Activity 7

1. -3
2. 26
3. -30
4. 46
5. -16, -13, 4, 12, 17, 30

Activity 8

1. -21
2. -550 ft
3. -750 ft
4. 30, 340 ft

Activity 9

Answers may vary.

Activity 10

Answers may vary.

Understanding Positive and Negative Integers

Thank you

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