

YEAR 8 MATHEMATICS WEEK 3 2020 (TERM 2)

Year: 8

Date: Tuesday 2 June 2020

STRAND: NUMBERS

TOPIC: Directed Numbers

LESSON OUTCOME: At the end of this lesson student(s) should be able to know how to read directed numbers on a number line, thermometer and graph.

Instructions: Hi dear Parents/Guardians and students - In this Lesson students are going to read directed numbers on a number line, read from a thermometer and graph by doing the selected questions for **Exercise 2.2**.

*[Note that all the Quizzes/Test and or Assignment will be based on the selected questions for each exercise. These lessons are designed for **one hour per Lesson**.]*

What to do: Do the following selected questions

Exercise 2.2: Q1; Q2; Q3; Q4; Q6; Q7

Solutions: Solutions will be available online via

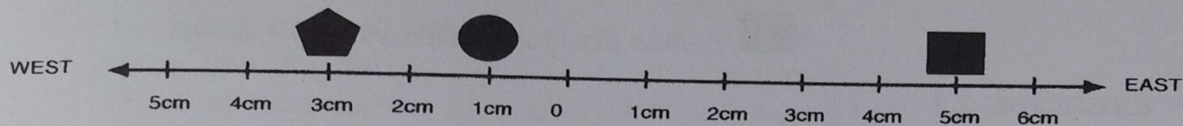
<https://www.facebook.com/centralschoolemergencyforum/posts/108720557434149>




Directed Numbers

To find a position on a number line we need to know:

1. the starting position (usually shown as '0');
2. the two opposite directions along the line;
3. how far from the start to go.

Example:



- The  has position 3cm west of zero.
 has position 1cm west of zero
 has position 5cm east of zero.

Positive and Negative Numbers

We can show position on a number line by calling numbers on the right side of zero (o) positive numbers and numbers on the left side of zero (o) negative numbers.

The start is at Zero.

Positive numbers +1, +2, +3, +4 are shown.

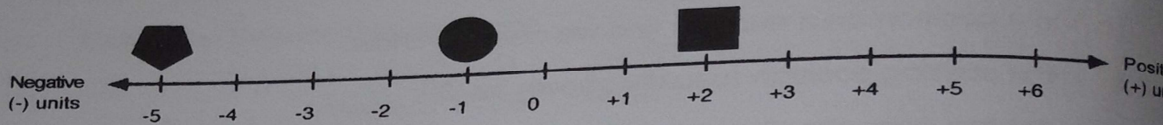
Negative numbers -1, -2, -3, -4 are shown.

When whole numbers are used on a number line we call them **integers**.

Positive **integers** are: +1, +2, +3, +4 etc.,

Negative **integers** are: -1, -2, -3, -4 etc.,.

Look at the number line.



On this number line:



has the position negative 5 or -5 units.



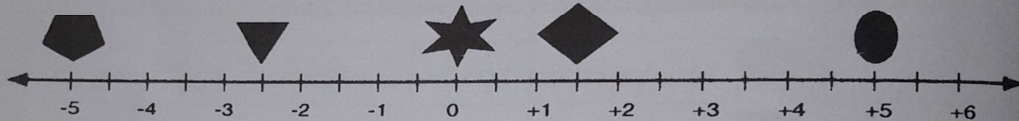
has position negative 1 or -1 units.



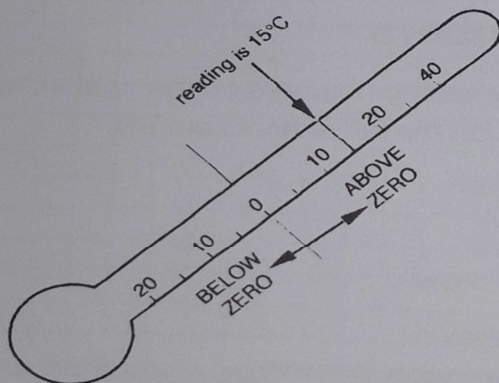
Has position positive 2 or +2 units

EXERCISE 2.2

1. Name the position of each object on the number line:



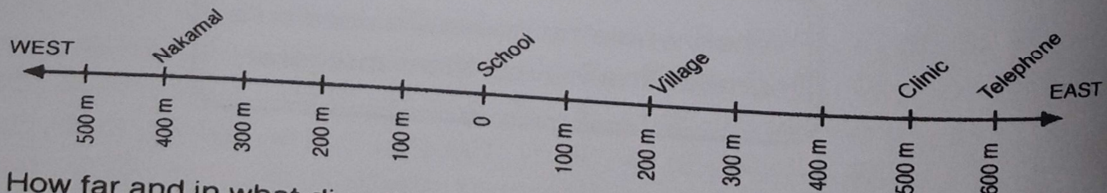
2.



The thermometer shows a reading of 15°C above zero. Write down the reading on the thermometer if the temperature:

- rises by 5°C
- rises by 10°C
- falls by 20°C
- falls by 10°C then rises by 18°C

3.



How far and in what direction is:

- The nakamal from the school?
- The village from the school?
- The clinic from the village?
- The telephone from the village?

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4. Draw a number line showing all integers from -6 to +6 and mark on it the following positions:
- | | |
|------------------|--------------------------------|
| a. M at -4 units | e. E at -5 units and + 4 units |
| b. S at -6 units | f. I at -3 units and 0 units |
| c. R at +1 units | g. C at -1 units and +2 units |
| d. L at +3 units | |
5. Draw a number line showing all the integers from -14 to + 16 (let 1cm = 2 units) and mark on it the following positions:
- | | |
|-------------------------|-------------------|
| a. A at -8 and +6 units | g. R at +8 units |
| b. E at 0 and +10 units | h. I at -4 units |
| c. K at +16 units | i. T at -6 units |
| d. G at -10 units | j. N at -14 units |
| e. V at -2 units | k. S at +2 units |
| f. E at -12 units | l. O at +14 units |
6. On a number line how many units are there from:
- | | |
|-------------|-------------|
| a. +1 to +6 | c. -2 to +3 |
| b. 0 to -2 | d. -7 to -4 |
7. Name the positions:
- | | |
|-------------------------------|-------------------------------|
| a. 4 units to the right of +3 | c. 2 units to the right of -5 |
| b. 3 units to the left of +6 | d. 5 units to the left of -3 |

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