



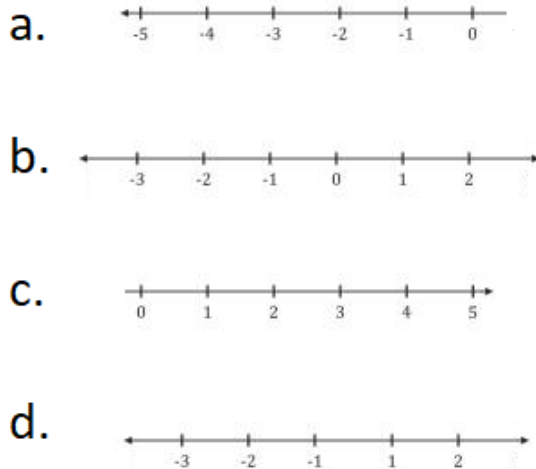
UNITED NATIONS COLLEGE I.E.D.
PREPARATORY WORKSHOP
II TRIMESTER
MATHEMATICS 6th



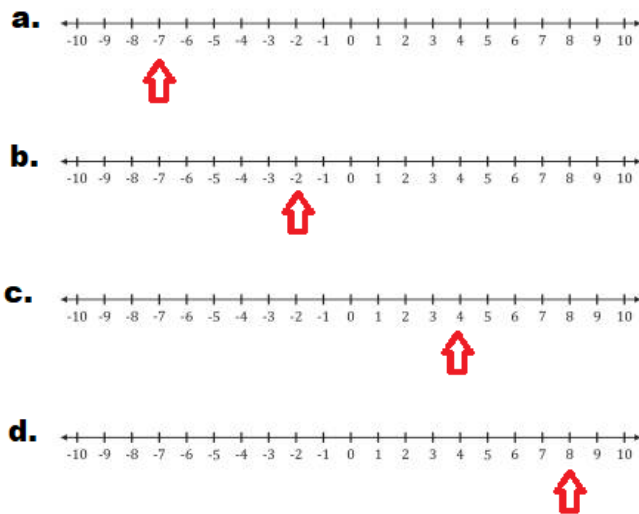
This workshop must be copied and solved in the mathematics notebook, as a requirement to present the competency-based test.

DELIVERY DATE: JULY 16

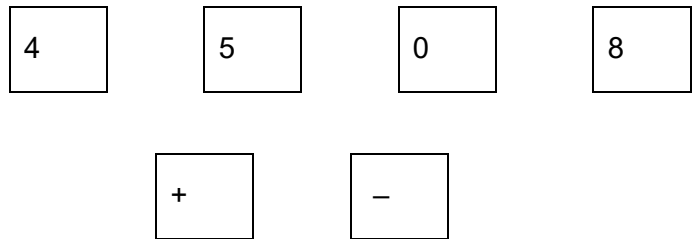
1. On which number line is the set of integers represented, Justify your answer.



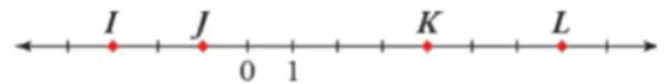
2. Which of the following number lines points to the smallest integer? Justify your answer.



In Math Class, the teacher shows six index cards each with a different digit or symbol for students to form numbers:



3. What is the largest three-digit number that can be formed?
4. What is the smallest four-digit number that can be formed?
5. If we take the larger number and subtract the smaller number. What will be the result?
6. What are the integers associated with the letters "I", "J", "K" and "L"? represented on the following number line



7. What is the number before point I?
8. What is the successor number to the L-point?
9. How many units are there between point "I" and point "L"?

The following table shows the boiling temperatures of some elements of nature.

Element	Boiling (C°)
Hydrogen	– 253
Helium	– 269
Aluminium	2467
Potassium	962
Mercury	357

- If the temperatures are ordered from lowest to highest, what is the sequence obtained?
- Which element has a lower boiling temperature than Mercury? Justify your answer
- What is the temperature difference between the lowest temperature and the highest temperature?
- A group of 8 friends decided to share the cost of a pizza that costs \$32. If 4 of them contribute positive money and the other 4 contribute negative money, distributing the expenses equally, how much should each friend pay?
- What does a negative amount mean in this context?
- How could you check if the calculation of the amount each friend must pay is correct?

Maria is keeping track of her personal finances. At the beginning of the month, he had \$500 in his bank account. During the month, she spent \$250 on groceries and received a \$300 deposit from her job. If we represent expenses with negative integers and income with positive integers. Answer questions 16 and 17.

- What is the ending balance of your bank account at the end of the month?
- What does a negative ending balance mean in this context?

- In a football game, a team scored 3 goals, but also conceded 5 goals. What is the team's goal balance?
- How would you represent goals scored and goals conceded with whole numbers?
- How might you interpret the goal balance in terms of the team's performance in the game?

A game consists of rolling a dice 3 times. The rules of the game are as follows:

- If the die lands on 2 or 4, the player advances 5 squares.
- If the die lands on 1 or 3, the player moves back 1 square.
- If the die lands on 5, the player goes back 4 squares.
- If the die lands on 6, the player advances 6 squares.
- The player who passes or reaches the box marked with the number 13 wins.

Beginning	1	2	3	4	5
					6
12	11	10	9	8	7
13 Winner					
14	15	16	17	18	19

Manuel rolled the dice 3 times and got the results shown in the table.

Launch	1	2	3
Result obtained	2	5	6

- If Manuel leaves the Start square, in which square was he at the end of the three throws.

22. If another player has only two throws, what would be the largest square he could reach.

Jorge bought some cleaning implements, he looks at the invoice.

INVOICE			
Buyer:		Jorge	
Description	Quantity	Unit Price	Total Price
Cleaner	3	\$17.900	\$53.700
Detergent	5	\$24.000	\$120.000
Brush	5	\$1.000	\$5.000
Bleach	3	\$20.100	\$60.300
Total =			\$239.000

23. What operations did you perform to calculate the total value of Jorge's invoice? Justify your answer with the development of operations.

24. The detergent had a discount of -4,000 per unit, what is the operation that determines the total discount of the detergent?

25. If the bleach discount is -10,000 per unit, what is the total price I pay for the bleach?

26. A bike rental company charges a daily fee of \$10 plus \$5 for each kilometer traveled. If a person rents a bicycle and travels more than 8 kilometers in total, what is the maximum length they can travel so that the total cost does not exceed \$50?

27. How can the above situation be represented in an inequality?

John is keeping track of the time he spends studying each day for a week. Its records are as follows (in hours):

- Monday: 3
- Tuesday: 4
- Wednesday: 2
- Thursday: 3
- Friday: 5
- Saturday: 6
- Sunday: 4

28. Represents the above data in a histogram.

29. What does the height of each bar in the histogram represent?

30. What additional information could you glean from the histogram about John's study habits during the week?