

FROSTY NUMBERS

The temperatures are chilling out on the frozen lake. Use your understanding of positive and negative numbers to solve these frosty problems.

Write an answer to each question.

1. What number represents the temperature twelve degrees below zero Celsius?
2. What number represents the temperature two degrees above zero Celsius?
3. Which temperature is warmer: -27°C or -18°C ?
4. What temperature is 20° colder than 6°C Celsius?
5. On Monday, the temperature was 4°C . On Tuesday, the temperature was -31°C . Charlie said the temperature had fallen 27° . Was he right?
6. What is the meaning of zero in 1-5 above?
7. A duck flew over Charlie's head at a height of 15 meters above the ice. With zero representing the top of the ice surface on the lake, what number represents the duck's location?
8. A fish swam near Charlie's hook 4 meters below the surface. With zero representing the top of the ice surface on the lake, what number represents the fish's depth?
9. If the duck is directly above the fish in problems 6 and 7, what is the distance between them?
 - a. 11 meters
 - b. 19 meters
 - c. -11 meters
 - d. -19 meters
10. Another fish swims 20 feet below the top ice surface. What number represents its location?



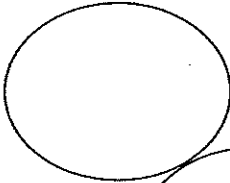
Name _____

NUMBERS TAKE A DIVE

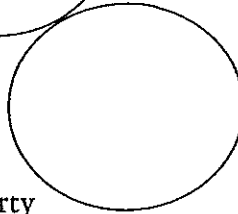
Positive and negative numbers come in handy during those diving descents and ascents.

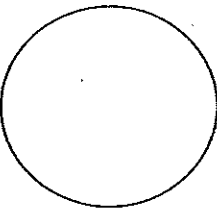
Write a number on the bubble to represent the location or amount.

1. The deck of the diver's boat is fourteen feet above sea level.

1 

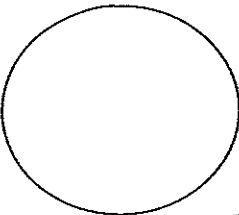
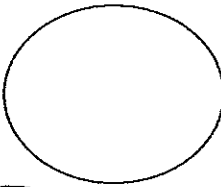
2. When the diver descends thirty-six and five-tenths feet below the surface.

2 

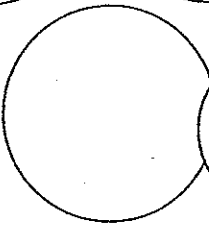
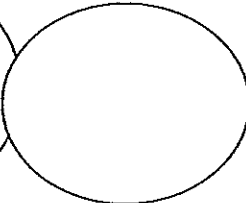
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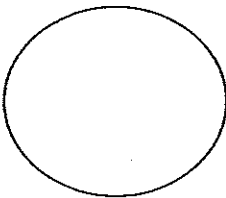
3. An octopus lurks at forty feet below the surface.

4. A seagull soars eighty-seven feet above the boat deck.

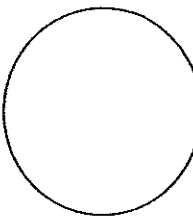
4   5

6. Marcy dives to -28 feet. Marcus dives ten feet deeper.

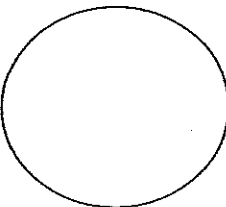
6   7

8 

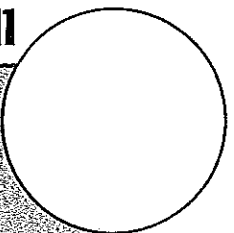
8. To pay for her scuba equipment, Marcy overdraw her bank account by seventy-five dollars.

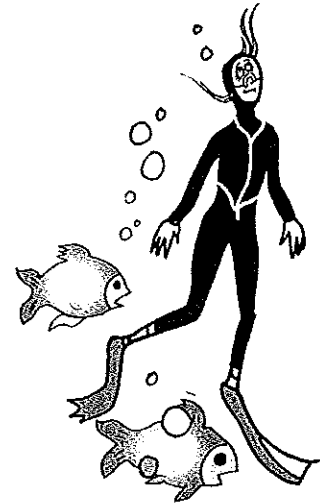
9 

10. Liam climbs the vertical sailboat mast. It is twenty-three feet above sea level.

10 

11. A diver descends 95 feet below the surface. Then she heads straight upwards a distance of 15 feet. She spies a shipwreck and descends 30 feet. What is her location now in relation to the surface?

11 



5. A lobster crawls on the ocean floor, sixty-five feet below the surface.

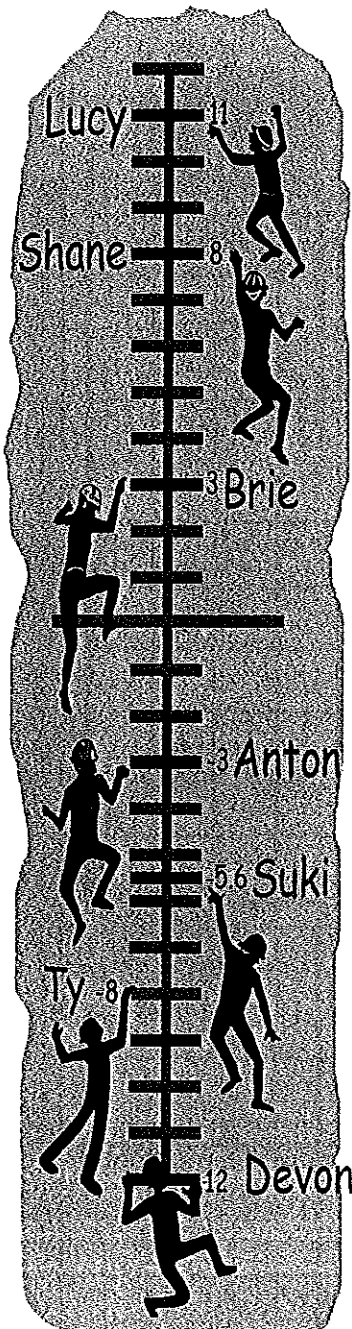
7. The water temperature is sixty-seven degrees Fahrenheit.

9. A diver is forty-six feet in vertical distance below the sea level.

Name _____

WHO'S WHERE?

Positive and negative numbers can help identify where someone is in relation to a set place (labeled zero) or to others.

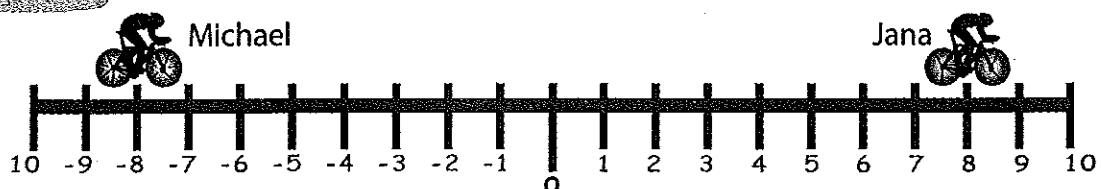


Zero represents the place on the rock wall where the climbers began their climb today. Use the vertical number line to answer 1-4.

1. What climber's position has a value opposite from the value of Ty's position?
2. What other climbers are at locations that represent opposites?
3. What is Devon's location?
4. If the numbers represent meters, what is the distance between Suki's and Lucy's positions?

Zero represents the race's starting point. Michael started behind due to a pre-race penalty. Use the horizontal number line to answer 5-10.

5. What is Michael's location?
6. What is Jana's location?
7. Describe the relationship between their locations.
8. What is the opposite of -4 ?
9. What is the opposite of the opposite of -4 ?
10. Draw a biker at -3.5 .



Name _____