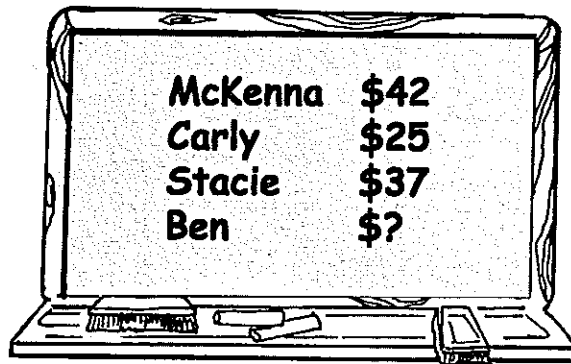


What are These Strange Numbers?

Ben was very upset. All the children in his family were supposed to write how much money they had on a large blackboard, but Ben didn't know what to write.

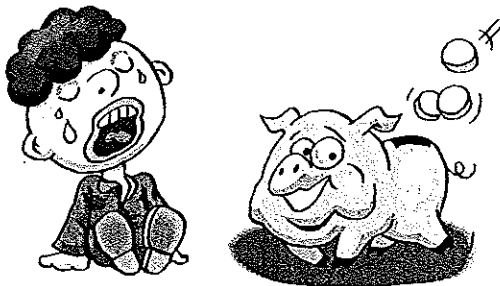


All the other children wrote amounts of money like \$25 or \$42, but Ben wasn't sure what to write. He had \$15 in his piggy bank, but he borrowed \$35 from his mother to buy a computer game.

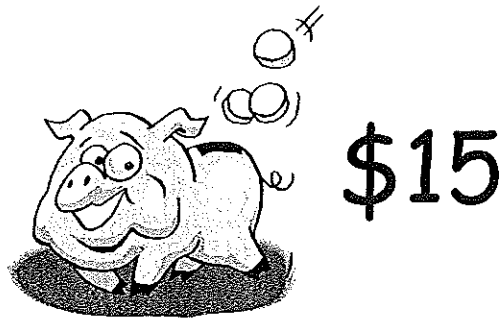


Ben knew that because he owed his mother \$35 and he only had \$15 in his piggy bank, the amount of money he had was less than \$0. But how could he write that amount of money?

You owe me \$35!



What Ben needs to learn about are negative numbers. If he combines his money in the piggy bank with what he owes his mother, he ends up with a minus \$20.

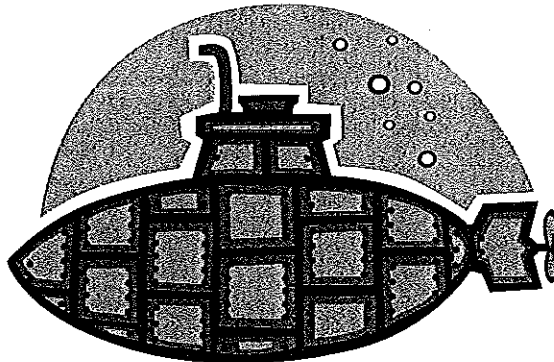


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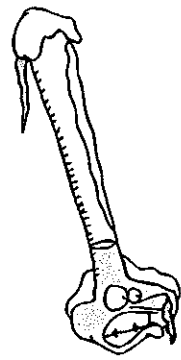


Answer -\$20

Negative numbers are used to show things that are less than 0. This submarine is 400 feet below the surface of the ocean, so we say it is at -400 feet.



Negative numbers are also used to show temperatures that are below zero degrees.



Negative numbers are also used to show that money is owed. When you owe money, you have a debt.



I have \$10.



I have \$15.



I owe \$35 so I have -\$35



If the amoebas put their money together, they would have -\$10.



What are These Strange Numbers? Level 1

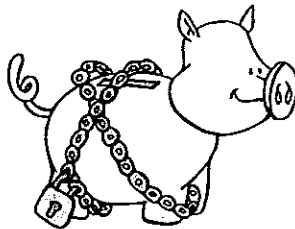
1) Anna has \$5 in her purse, but she owes her mom \$6. How much money would you say that Anna has?



2) Tom has \$20 in his savings account, but he owes his dad \$20. How much money would you say that Tom has?

3) If the temperature starts at -5° and drops to -10° , how many degrees did it drop?

4) Stu has \$10 in his piggy bank, but he owes his sister \$15. How much money would you say that Stu has?



5) Nancy owed her mother \$10 and she owed her brother \$10. How much money would you say that Nancy has?

- a) \$20
- b) -\$20
- c) \$0

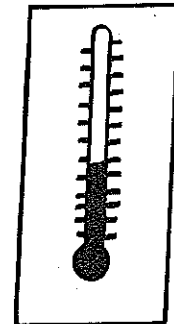
What are These Strange Numbers? Level 2

1) Lyn had \$25 in her pocket, but she owed her mom \$35. How much money would you say Lyn had?



2) $20 - 15$ is an easy problem, the answer is 5. What is the answer to the problem $15 - 20$?

3) If the temperature is 10°F and then gets 15° colder, what is the new temperature?



4) Four brothers had no money and they each owed their dad \$5. How much money do the four brothers have all together?

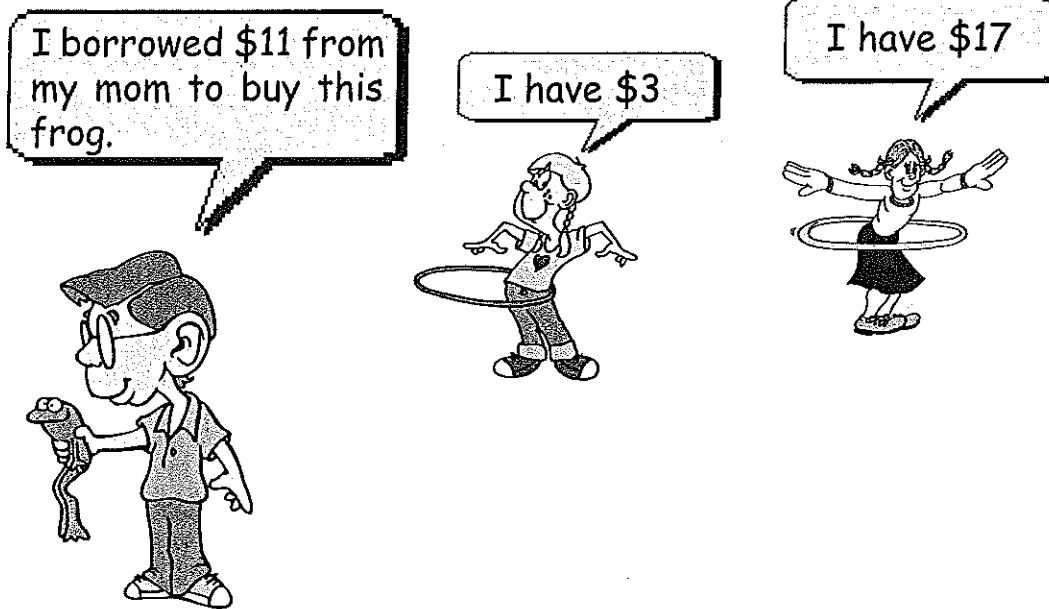
5) The highest point on Earth is 6 miles above sea level. The lowest point is a spot in the ocean that is about 7 miles deep. If a worm is at the lowest point, how much higher than the worm is a mountain climber who is at the highest point on Earth?



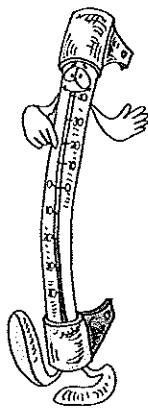
What are These Strange Numbers?

Level 3

1) Three friends decided to combine all their money. Rachel has \$17, Lauri has \$3 and Luke owes his mom \$11. How much money would you say they have all together?



2) The temperature was 8 degrees below zero in the morning and then rose to 12 degrees above zero at lunchtime. How many degrees did the temperature rise?

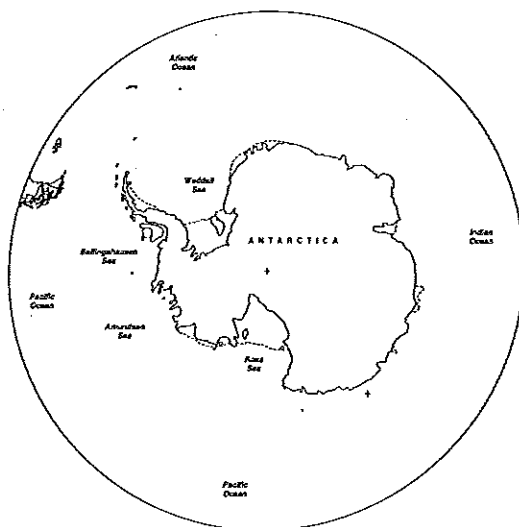


3) Jill received \$15 for her birthday. She spent \$12 and then found \$7 on the sidewalk. On her way home she lost \$9.50. How much money does Jill have now?

4) Scott had no money, so he borrowed \$11 from Dan. He also borrowed \$7 from his dad. After he spent the money he borrowed, Scott found \$10. How much money would you say Scott has now?



5) One day the temperature at a science camp in Antarctica was -120°F . That same day, the temperature at the Panama canal was 100°F . How many degrees warmer was it at the Panama Canal than at the science camp?



What are These Strange Numbers? Genius Level

1) Samantha had \$8, but she owed \$17 to her grandmother. For Samantha's birthday, her grandmother gave her \$5 and also wrote the following on a birthday card:

In addition to the \$5 present, I am also taking away \$10 of the debt that you owe me.

**I am taking away \$10 of
the debt that you owe me.**

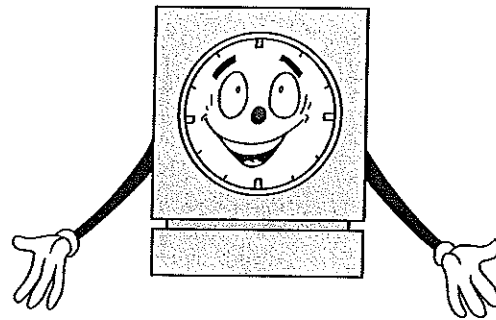
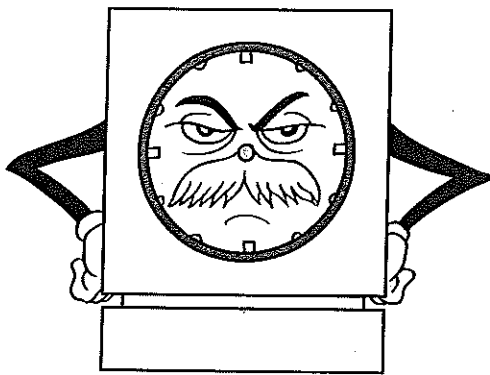
How much money would you say that Samantha has now?

2) A snake was at the bottom of a 6 foot deep well. Each day it would climb up 5 feet, but then it would slip down 4 feet at night. How many days would it take for the snake to get out of the well? (Be careful, this is a tricky problem.)

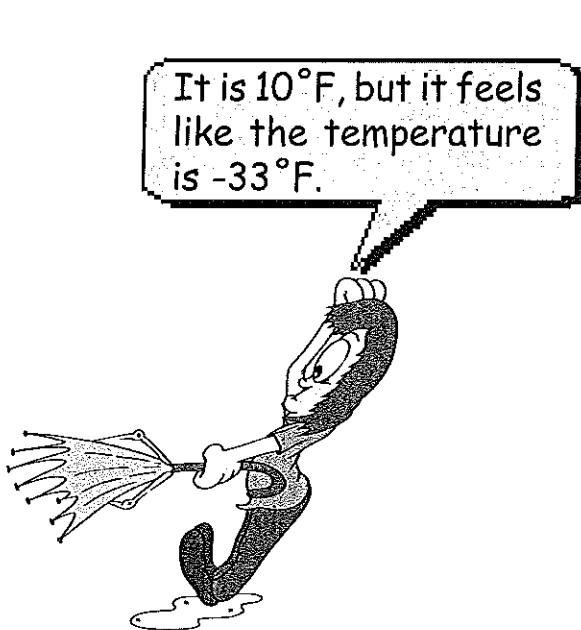


3) The lowest possible temperature is -459.6°F . Water boils at 212°F . If the temperature dropped from 212°F to -459.6°F , how many degrees did it drop?

4) Two clocks start at noon. One clock is broken and loses 10 minutes every hour. When the good clock says 12:00 midnight, what time will the broken clock say?



5) If the temperature is 10°F and the wind is blowing at 30 miles per hour, the temperature feels like it is -33°F . How much colder does a child feel who is out in the wind when you compare him to one who is outside and not in the wind?

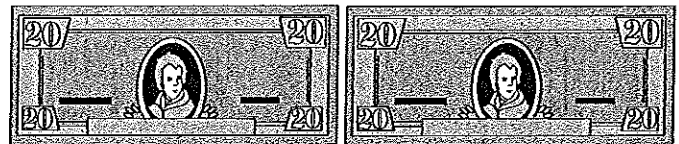


Let's Share

Amanda wanted to split \$40.28 with her brother, but she was having a hard time trying to decide how to do it mentally. She knew that it would be easy to do if she only had \$40. She also knew it would be easy to do if she had only 40¢ or if she only had 8¢.

After thinking about the problem for a long time, Amanda had a brilliant idea.

If I break \$40.28 into dollars, dimes and pennies, it will be easy to divide into two equal amounts.



That was a great idea! I am going to try to do division problems mentally if I can.

