1. B—Look at the two lines in the original figure. When you superimpose them, they form a cross sign (X) and not a plus sign (+). So options A and D are eliminated. In the original figure, the black circular dots are not on the corners of the lines. so option C is also eliminated.

2. C—An object has an inverted image in water. This is similar to turning the object upside down.

3. 6—Divide the whole diagram into 4 equal quarters, each comprised of a 3x3 square. The sequence of numbers in the top left quarter is repeated in each of the other quarters, but increasing by 1 each time as you move clockwise.

4. M—Working in rows, add together the numerical values of the left and right hand letters to give the numerical value of the central letter.

5. 27 days—He climbs 4 meters every day and slips 3 meter down. That means he climbs 1 meter in total each day, so on 26th day he would have climbed 26 meters and on 27th day he will climb 4 meter again so total 30 meter he will climb in 27 days.

6. 73—The solution requires getting the nearest smaller number that is the power of 2 (in this case, it is 64) and subtract it with the given number.100 – 64 = 36. Now we apply the formula 2n+1. 2*36+1=72+1=73.

7. Double Or Nothing

8. SQUARE—Square the first shape's sides and the remaining shapes must add up to this number.

9. 99/70—Each successive term better approximates the square root of 2 and is formed by (a+2b)/(a+b).

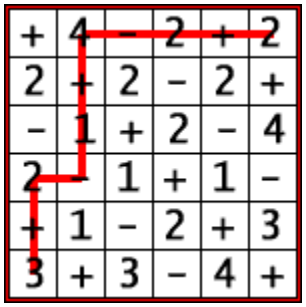
10. $(0!+0!+0!+0!+0!)!=120$ (or other answers)

11. Take .2 and raise it to the power of -2 and then take the square root (or other answers)

12. D, C, A, B

13. 4: A, C, C, A; B, D, D, B; C, B, A, D; D, A, B, C

14. 8



15. Turn the grid upside down.

16. You don't have to find the value of every symbol. The rows add up to 80, and this will be the sum of every symbol in the grid, 23 + 18 + 24 + 15 = 80. Therefore, the columns must also add to 80, making the missing column 14.

17. 21 hours and 36 minutes (21.6). The exact size of the pipes and reservoir doesn't matter. Label the large pipe L and the small pipe S, and if the reservoir has a total of T gallons, then T/6L = 12, which means L =T/72 and T/(3L+9S) = 8, which means S = T/108. We want T/5S, which is 108/5 = 21.6

18. They must be alive, human, et al.

19. 45— 10 could not speak Spanish, 20 could not speak Italian, and 25 could not speak Mandarin. So there could have been 10 people who spoke none of those languages. However, that would maximize the number of people who could speak all three, and the problem asks at least how many speak all three. Therefore, we must assume that these 10, 20, and 25 people are all separate people. Having identified 55 each of whom is missing one language, the remaining 45 speak all three.

20. About 500,000…Assume the bus is 50 balls high, 50 balls wide, and 200 balls long. You could also describe a method to estimate this number.