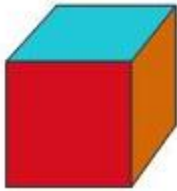
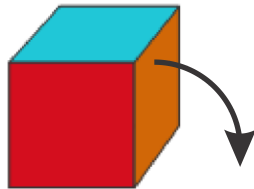


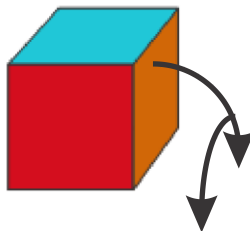
1. Write numbers 45 and 165 in binary system
2. Write the numbers, written in the binary system in decimal system:
a. 11011011; b. 10001101, c. 11111111
3. Write the numbers 245 and 324 in 6-based place-value system. Remember, that in this system you will have only 0, 1, 2, 3, 4, and 5 as digits.
4. Write the numbers 234_6 and 403_6 written in the 6-based place-value system (small number 6 shows that the number is not in decimal, but in 6-based system) in decimal system.
5. On a picture on the right there is a surface of a cub. What do you think about the color of bottom side of this cub?



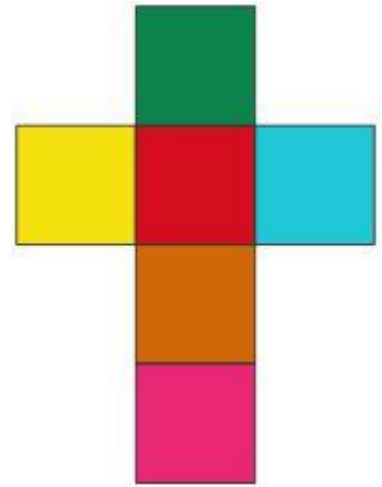
If you turn this cube ones following the arrow, what color of the upper side will be?



If you turn this cube one more time following the second arrow, what color of the upper side will be?



6. A cube with a side of 1 m was cut into smaller cubes with a side of 1 cm and these small cubes were placed in a row. How long is the row?



7. A teacher gave a very difficult problem for the test. When he checked the all works, he realized that the number of girls who solved the problem is equal to number of boys who didn't. What is greater, the number of students who solved the problem or the number of boys?
8. There are 2020 even numbers. Can their sum be a prime number? Explain your answer.
9. There are 2020 odd numbers. Can their sum be a prime number? Explain your answer.
10. a, b, c, d are natural numbers and $a < b < c < d$. Compare the fractions:

a. $\frac{a}{b} \quad \frac{b}{a}$; b. $\frac{d}{c} \quad \frac{c}{d}$; c. $\frac{c}{a} \quad \frac{b}{d}$; d. $\frac{a}{d} \quad \frac{c}{b}$

11. Solve the equations:

a. $80x - 540 = 180$

b. $150 - 630 : x = 60$

c. $(260 - x) : 6 = 30$

d. $(x : 7) \cdot 50 - 75 = 175$