

01

Two consecutive natural numbers add upto 2021. Find them.



Out of the two natural numbers one is greater than the other and it is 1 more than the smaller.

$$\Rightarrow \text{Smaller of these two numbers} = \frac{2021-1}{2}$$

$$= \frac{2020}{2} = 1010 \text{ and the greater number}$$

$$= 1010 + 1 = 1011$$

Hence, the two numbers are 1010, 1011

02

Using +, -, × in the circle and parenthesis. Complete this equation to make a true statements.

$$4 \bigcirc 4 \bigcirc 4 \bigcirc 4 = 4$$

$$4 \times (4 - 4) + 4$$

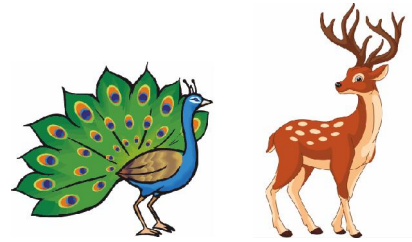
$$= 4 \times 0 + 4$$

$$= 0 + 4$$

$$= 4$$

03

At a zoo, there were peacocks and deer in the same enclosure. Pavan counted 40 heads and 128 legs altogether. How many animals of each type were in the enclosure ?



There were 24 deer and 16 peacocks in the enclosure.

Number of deer	Number of peacocks	Total number of legs
20	20	$20 \times 4 + 20 \times 2 = 120$
21	19	$21 \times 4 + 19 \times 2 = 122$
22	18	$22 \times 4 + 18 \times 2 = 124$
23	17	$23 \times 4 + 17 \times 2 = 126$
24	16	$24 \times 4 + 16 \times 2 = 128$

04

Aparna's age is three times Dhruv's age. Dhruv is 4 years older than Bose and their age add upto 91. How old is Bose.



If we add 4 years to the age of Bosu then Bose's age

$$= \text{Dhruv's age} = \frac{1}{3} \text{ of the age of Aparna.}$$

If we take Aparna's age = 3 times the age of Dhruv

$$\text{Dhruv age} = \text{Bosu's age} + 4 \text{ years} = 1 \text{ times}$$

$$\Rightarrow 5 \text{ times the age of Dhruv} = 91 + 4 = 95 \text{ yrs}$$

$$\Rightarrow \text{Dhruv's Age} = 19 \text{ yrs}$$

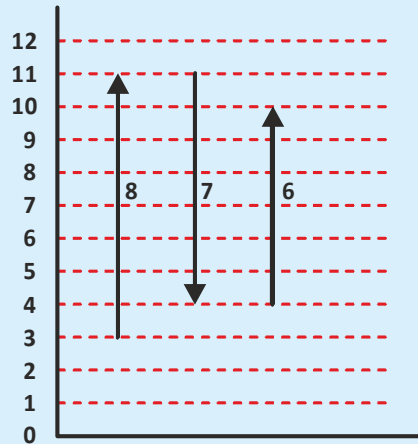
$$\Rightarrow \text{Age of Bosu} = 15 \text{ yrs}$$

05

Pavan got into a lift. He went down six floors, up seven floors and then down eight floors. He was finally on the third floor. On which floor did he get in ?



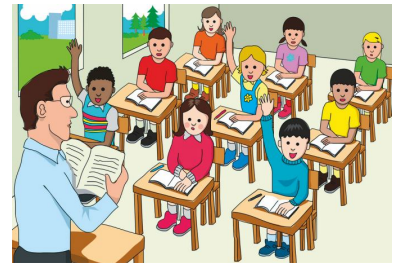
Up And Down.
Draw a diagram



Pavan got into the lift on the tenth floor.

06

Some students of the same age enrolled in STEP-UP Learning Course. If 12 students were placed in a class, one of the classes would only have 6 students. If 10 students were placed in a class, the principal would have to open one more class. How many students enrolled in the course ?



Shortage = 6 students; Excess = 10 students

$$6 + 10 = 16$$

$$\text{Difference in the class size} = 12 - 10 = 2$$

$$16 \div 2 = 8$$

There were 8 classes

$$8 \times 12 - 6 = 96 - 6 = 90 \quad (\text{or}) \quad 8 \times 10 + 10 = 80 + 10 = 90$$

90 students enrolled in the course