

**INTERNATIONAL INDIAN SCHOOL, BURAI DAH**  
**COMPUTER SCIENCE**  
**CLASS 5 A/B/C - 2025-26**  
**TERM II-Worksheet - I**  
**(L# 8,9,12,14)**  
**SECTION A**

**Choose the correct answer and write the option.**

1. The base of the binary number system is:  
a) 8 b) **2** c) 10 d) 16
2. Which block starts the program in Scratch?  
a) **When green flag is clicked** b) Forever c) Move 10 steps d) Repeat 10
3. Ask and Answer block is available in the \_\_\_\_\_ block  
a) **Sensing** b) Motion c) Events d) Looks
4. Decimal 1 in binary is:  
a) 0 b) 01 c) 00 d) **1**
5. Decimal 3 is written in binary as:  
a) 10 b) 100 c) **11** d) 101
6. Which block of scratch takes care of the movements shown?  
a) Sensing b) **Motion** c) Events d) Looks
7. Which of the following is a trigger block in Scratch?  
a) Turn 90 degrees b) **When space key is pressed** c) wait 2 seconds d) Say "IISB-Grade 5"
8. "If block" belongs to which category?  
a) Looks b) Events c) **Control** d) Motion
9. Which block returns a value?  
a) Looks b) Events c) Control d) **Function**
10. For which number is the absolute value just the number itself?  
a) positive number b) negative number c) Zero d) **both Zero and Positive number**
11. Which of the two numbers: 25 and -27 has a larger absolute value?  
a) 25 b) **-27** c) Cannot be said d) 20
12. What is the absolute value of -10?  
a) **10** b) -10 c) Zero d) 5
13. The decimal number system has a base of:  
a) 4 b) 6 c) **10** d) 16
14. \_\_\_\_\_ block changes the appearance of sprite and background of the stage.  
a) Sensing b) Motion c) Events d) **Looks**
15. The base of a number is also called its \_\_\_\_\_.  
a) Factor b) Index c) **Radix** d) Power

**SECTION B**

**Write the correct answer in the blank.**

1. The symbols in binary number system are \_\_\_\_\_ and \_\_\_\_\_ (0 and 1)
2. The binary of decimal 12 \_\_\_\_\_ (1100)
3. \_\_\_\_\_ block does not have a notch.(function)
4. command blocks can be joined to create a sequence of commands called a \_\_\_\_\_ (Stack)

5. Decimal 0 in binary is \_\_\_\_\_ (0)
6. \_\_\_\_\_ waits for the specifies condition to come True.(Repeat until)
7. \_\_\_\_\_ dark cards/Pink cards are required for the conversion of 100 into decimal.(two)
8. A sprite can bounce off the edge using the \_\_\_\_\_ **block**.(if on edge, bounce)
9. **Move 10 steps** belongs to the \_\_\_\_\_ category.(motion)
10. \_\_\_\_\_ the maximum valued card required to convert 11010 into decimal.(16)
11. \_\_\_\_\_ is the value of the number with the sign ignored.(absolute value)
12. Two different numbers have the same absolute value, then the sum of the numbers is \_\_\_\_\_.(zero)
13. The absolute value of zero is \_\_\_\_\_.(0)
14. \_\_\_\_\_ is a step-by-step set of instructions used to solve a problem.(algorithm)

### SECTION C

**Match the following:**

**Refer TB exercise (L# 8,9,12,14)**

### SECTION D

#### ANSWER THE FOLLOWING

1. Write the binary representation for the following decimals.

a) 15                      b)11                      c)26

Decimal - 15

2	15	1	Remainder Dividend Binary
2	7	1	
2	3	1	
2	1	1	
	0		

a) Binary - 1111

2	11	..... 1
2	5	..... 1
2	2	..... 0
	1	

b)  $\therefore 11_{10} = 1011_2$

2	26	..... 0
2	13	..... 1
2	6	..... 0
2	3	..... 1
	1	

c)  $\therefore 26_{10} = 11010_2$

2. Write the following binary numbers into decimal using multiplication.

a)101                      b)1111                      d)11010

Rightmost digit → position 0

Middle digit → position 1

Leftmost digit → position 2

- a)  $1 \times 2^2 = 1 \times 4 = 4$
- $0 \times 2^1 = 0 \times 2 = 0$
- $1 \times 2^0 = 1 \times 1 = 1$

Add them:

$$4 + 0 + 1 = 5$$

b)  $1 \times 2^3 + 1 \times 2^2 + 1 \times 2^1 + 1 \times 2^0 = 8 + 4 + 2 + 1 = 15$

c) Binary number: 1 1 0 1 0

Positions (from right to left):  $2^4 \ 2^3 \ 2^2 \ 2^1 \ 2^0$

Now calculate the decimal value:

$$1 \times 2^4 = 1 \times 16 = 16$$

$$1 \times 2^3 = 1 \times 8 = 8$$

$$0 \times 2^2 = 0 \times 4 = 0$$

$$1 \times 2^1 = 1 \times 2 = 2$$

$$0 \times 2^0 = 0 \times 1 = 0$$

Add them together:

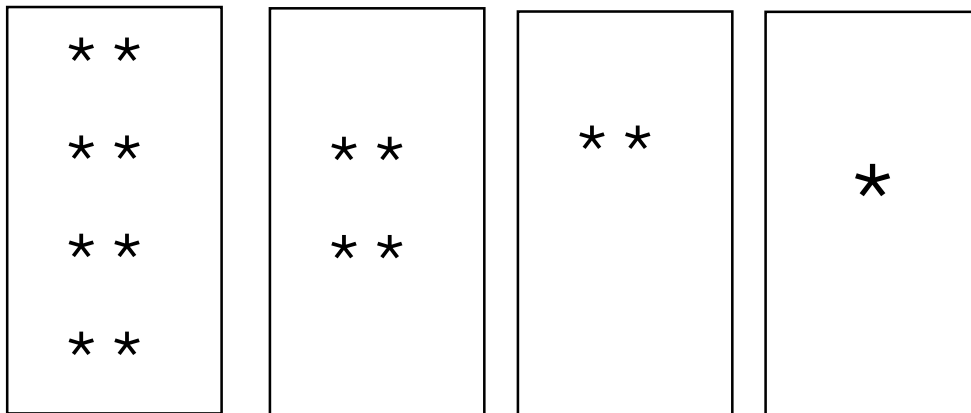
$$16 + 8 + 0 + 2 + 0 = 26$$

So, 11010 in binary = 26 in decimal.

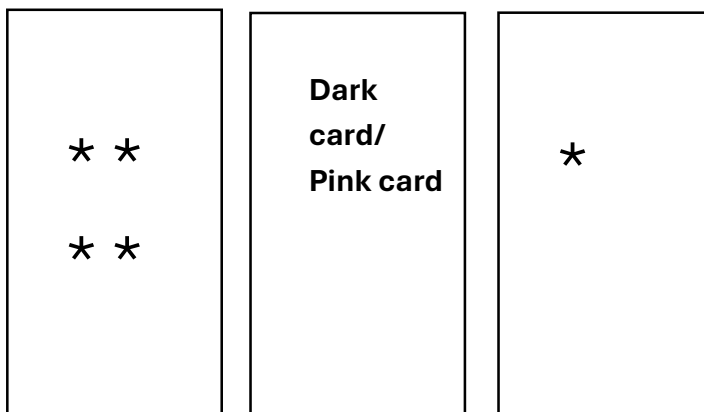
3. Convert the following binary numbers into decimal using the visual card method.

a) 1111 b) 101

a)



b)



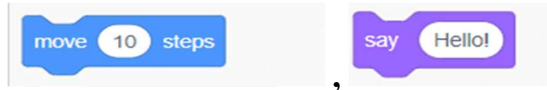
4. Write 2 features of Scratch.

1. Kids get to learn intricacies(complexities) of programming well from working on it.
2. It allows users to create games, animated stories and movements.

5. Name and explain the four kinds of blocks in Scratch.

1. **Command blocks:** It tells the sprite to perform an action. Command blocks can be joined to create a

sequence of commands called a stack. **Eg:**

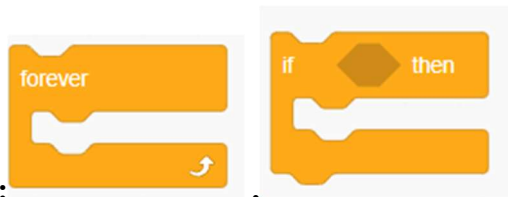


2.**Sensing block:** It helps computers to detect things such as movement of mouse pointer, touching another sprites etc..eg :



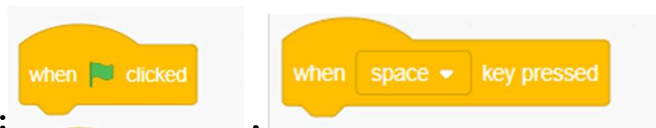
3.**Control block:** It tells the computer how or when to do something. It controls the flow of the program.

**Eg:**



4.**Events block:** It starts with a script in scratch. It tells the program when to begin doing something.

**Eg:**



6. What is the use of the Ask and Answer block?

It is a sensing block. The Ask and Answer blocks let your program communicate with the user and use their input.

7. Explain the purpose of the Until block in Scratch, list its different types, and illustrate with one example.

The Until block in Scratch is used to repeat an action until a specific condition becomes true. The instructions inside the block keep running again, and they stop only when the given condition is satisfied.

There are two types of until block: **wait until and repeat until.**

- The wait until suspends the process until the condition is True.
- The repeat until executes until the condition is True.

For example, you may write a program where the speed of the sprite first increases to a point and then reduces. So when the speed exceeds the value, you reduce the speed of sprite.

8. Write an algorithm to find the maximum number from the given list of numbers.

Step1 : Start

Step 2:Input the list1 from user.

Step 3:Change all the numbers to absolute to create list 2.

Step 4: Find the maximum value in list2 and its position in list2.

Step 5: The number with this place in list1 is the one with maximum absolute value.

Step 6: Stop

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