

Operators :-

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B

Arithmetical operators :-

Addition :-

Count Of Mangoes , Count Of Apples = 10 , 3

Addition :- +

Answer = count Of Mangoes $\boxed{+}$ count Of Apples -

Subtraction :- -

Answer = count Of Mangoes $\boxed{-}$ count Of Apples

Multiplication :- *

Answer = count Of Mangoes $\boxed{*}$ count Of Apples

Division :- /

Answer = count Of Mangoes $\boxed{/}$ count of Apples

Modulus :- %

Answer = count of Mangoes $\boxed{\%}$ count of Apples

Exponentiation :- **

Answer = count of Mangoes $\boxed{**}$ Count Of Apples

Floor division //

Answer = countOf Mangoes // countOf Apples.

A Common point

point (if "Arithmetic operators name : {countOf Mangoes & ^{operator}
countOf Apples} = {Answer}")

~~and use~~

B Relational operators () (true / false)

CountOf Mangoes, CountOf Apple = 10, 3

Equal to (= =)

Answer = countOf Mangoes [= =] countOf Apple

Not equal to (!=)

Answer = countOf Mangoes [= !=] countOf Apple

Greater than (>)

Answer = countOf Mangoes [>] countOf Apple

Less than (<)

Answer = countOf Mangoes [<] countOf Apple

Greater than or equal to ($>=$)

Answer = countOfMangos [$>=$] countOfApple

Less than or equal to

Answer = countOfMangos [\leq] countOfApple

Common point :- countOfMangos <= countOfApple

point (& " Relational operator name : { countOfMangos } operator
 \leq countOfApple } = { Answer } ")

Q3

Logical operators :-

isReady, isGood = True, False

AND (T AND T = T , T AND F = F) (And)

0	0	=	0
1	0	=	0
0	1	=	0
1	1	=	1

F	F	=	F
T	F	=	F
F	T	=	F
T	T	=	T

Answer = isReady [and] isGood

OR (or)

O/P

0	0	0
1	0	1
0	1	1
1	1	1

O/P

R	F	F
T	F	T
F	T	T
T	T	T

Answer = isReady or isGood

NOT (not)

If True → it considered as False

If False → it considered as True

Answer = not isReady

2' 2' 2'
4 2 1

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(B)

Bitwise Operators

Red Team Score, White Team Score = 5, 2 = 101, 10

$$\begin{array}{r} 5 \rightarrow 0000101 \\ 2 \rightarrow 0000010 \\ \hline 0000000 \end{array}$$

AND (&)

Answer = RedTeamScore & WhiteTeamScore

OR (|)

Answer = RedTeamScore | WhiteTeamScore

$$\begin{array}{r} 101 \\ 010 \\ \hline 111 \\ 2' 2' 2' \\ 4 2 1 = 7 \end{array}$$

XOR (^) = 0101010

A	B	%P
0	0	0
0	1	1
1	0	1
1	1	0

101 XOR

110 = 7

Answer = RedTeamScore ^ WhiteTeamScore

NOT (~)

Answer = ~RedTeamScore

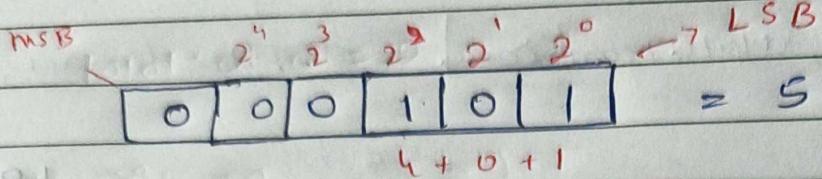
Left Shift (<<)

next page.

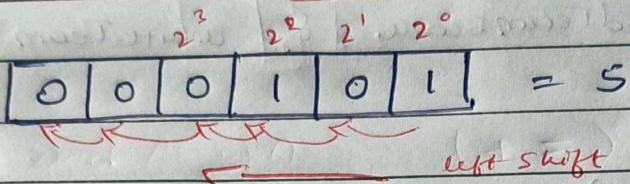
Left Shift

(\ll)

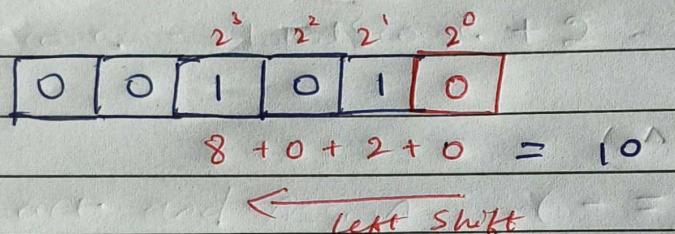
(less significant bits)



Answer left shift Before



left shift, after



NOTE

For the left shift the value (number) is multiple by 2. ($\times 2$)

for one left shift $\times 2$

for two left shift $\times 4$

three

four

Left shift by

25 \rightarrow left shift

250 \rightarrow 11

Answer = red Team Score \ll white Team Score

5
5 is left shift by $\rightarrow 2$

Answer = 20

1 time 5×2

2 time $5 \times 2 \times 2$
 5×4

Right shift ($>>$)

$$\begin{array}{cccccc} 2^5 & 2^4 & 2^3 & 2^2 & 2^1 & 2^0 \\ \boxed{0} & \boxed{0} & \boxed{0} & \boxed{1} & \boxed{0} & \boxed{1} \end{array} = 5$$

$4 + 0 + 1 = 5$

Before Right shift \Rightarrow exit

$$\begin{array}{cccccc} 2^5 & 2^4 & 2^3 & 2^2 & 2^1 & 2^0 \\ \boxed{0} & \boxed{0} & \boxed{0} & \boxed{1} & \boxed{0} & \boxed{1} \end{array}$$

($= 1$)

After Right Shift :-

$$\begin{array}{cccccc} 2^2 & 2^1 & 2^0 & \xrightarrow{\text{exit}} & & \\ \boxed{0} & \boxed{0} & \boxed{0} & \boxed{1} & \boxed{0} & \boxed{1} \end{array}$$

$0 + 2 + 0 = 2$

Answer = Red Team Score $\boxed{>>}$ White Team ScoreAnswer = 11.

for 2 times right shift. = ok.

~~for 2 times~~ $\begin{array}{cccccc} 2^5 & 2^4 & 2^3 & 2^2 & 2^1 & 2^0 \\ \boxed{1} & \boxed{1} & \boxed{0} & \boxed{1} & & \end{array}$

$4 + 0 + 1 = 5$

for 1 time right shift

$$\begin{array}{cccccc} 2^1 & 2^0 & & \xrightarrow{\text{exit}} & & \\ \boxed{1} & \boxed{0} & \boxed{1} & & & \end{array}$$

$2 + 0 = 2$

for 2nd time right shift

$$\begin{array}{cccccc} 2^0 & & & \xrightarrow{\text{exit}} & & \\ \boxed{1} & \boxed{0} & & & & \end{array}$$

($= 1$) $1 = 1$

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Assignment Operators :-

totalScore $\leftarrow 5$

1 0 0 1 0 1 0
1 0 0 1 0 1 0

Assign $\leftarrow (=)$

Answer = totalScore

1 0 0 1 0 1 0
1 0 0 1 0 1 0

Add and Assign $\leftarrow (+=)$

totalScore $+= 2$

or
011 1 0 0 0 0

totalScore = totalScore + 2.

Subtract and Assign $\leftarrow (-=)$

totalScore $-= 1$

or
011 1

totalScore = totalScore - 1

Multiply & assign $\leftarrow (*=)$

totalScore $*= 3$

or
011 1 0 0 0 0

Divide & assign $\leftarrow (/=)$

totalScore $/= 2$

or
011 1

Modulus & assign $\leftarrow (\%=)$

totalScore $\% = 3$

Floor divide & assign (11=)

totalscore % = 3

Exponent & assign ($\star\star =$)

$$\text{total score} \times \star = 3$$

June 10, 1907 - Left

Answers to End-of-Chapter Questions

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