2) The product of two positive integer is 240 & the difference of the number is 8. which of the following can be the sum of the two numbers?

options
a) 12
b) 16
c) 24
d) 32

Soln) Sum = 240 , Diff = 8

Find factors of 240 is

1, 240
2, 120
3 80
4 60
5 48
6 40
8 30
12 20 — difference is

∴ one of the number is 12

3) the product of two positive integers is 185. If one integer is a prime number greater than 11. which the following can be the other number?

options
~~a) 37~~
b) 185
c) 5
d) 1

Soln factors of 185 is

1, 185
5, 37 → 37 is a prime number also greater than 11

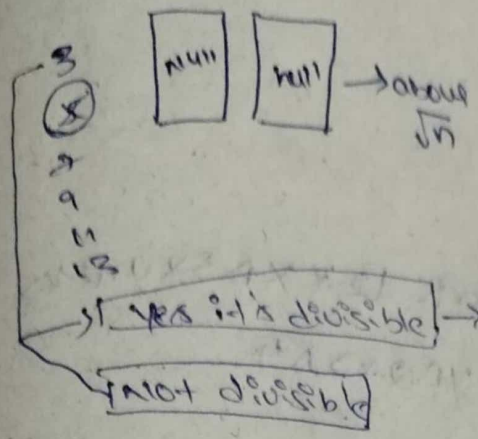
=> checking wether a number is a prime or not

* 'n' is odd
* 'n' doesn't end with 5
* For declaring 'n' is a prime to check with factors upto $\sqrt{n}$

99°

181

1 × 181



49 — ÷3, 7

121 — ÷3, 7, 11

169 — 37 11 13

problems:

① which of the following is a prime numbers?

a) 147
b) 91
c) 101
d) None of these

② which of the following is a prime number?

a) 127
b) 141
c) 171
d) All of these

3) Find the HCF of 2, 4, 8, 12

a) 4
b) 6
c) 2
d) 8

2	4	8	12
1, 2	1, 4	1, 8	1, 12
	2, 2	2, 4	2, 6
		4, 2	3, 4
			4, 3
			6, 12

4) The HCF of the numbers 27, 81, 72

	27	81	72
a) 9			
b) 6	1, 27		
c) 9	3, 9		
d) 12	9, 3		

5) What is the HCF of the numbers $12x \wedge 3y \wedge 2z$, $15x \wedge 2y \wedge 3z \wedge 2$, $18x \wedge 3y \wedge 2z \wedge 4$

a) $3xyz$ ⟶ 3 1 2

b) ~~$12xyz$~~ 1

c) $3x \wedge 2y \wedge 2z$

d) $12x \wedge 2y \wedge 2z$

Sol 10

a ⟶ $2^3 \times 3^4 \times 5^1 \times 11^2$

b ⟶ $2^5 \times 3^5 \times 5^2 \times 7^2$

c ⟶ $2^6 \times 3^4 \times 5^3 \times 7^2$

HCF (a, b, c) ⟶ All common prime factors with their lowest available powers

LCM (a, b, c) ⟶ All prime factors with their max. available powers

* which are the numbers that would leave the same remainder when divide both by 46 & 76

sol: 46, 76

46 46+30

or x + 0

$\frac{46}{D}$ $\frac{46+30}{D}$ we can divide the the factors of 30

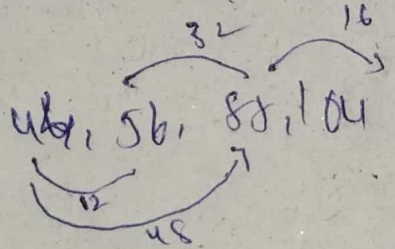
x, x+12 leaves the same Remainder = 0

=> x x+12

=> when ever the number can be divided by factors 12

The following cases are the HCF of numbers

38, 50 → 2
44, 56 → 4
48, 60 → 12
42, 54 → 6
15, 27 → 3
12, 29 → 1



* whenever like we can find out the difference and choose the lowest one divide with that factors of that number only.

2) 44, 56, 93

37

12

Assignment

Which of the following number is the HCF of 56 and 68

56 68

a) 12 56, 56+12

b) 4

c) 6

d) none

2) Which of the following number is the HCF of 136 and 166

136 136+30

a) 12 factors of 30

b) 4 15

c) 6 6

d) 2 5

3

2

1