

Find, and list in ascending order, all of the factors of the number 48(write the numbers separated by commas in ascending order)

If a number is divisible by 66 then it must also be divisible by

The number 5 is a factor of 65 because it divides into 65 without a remainder. Write down the other three separated by commas factors of 65

Write all the factors of 36(write the numbers separated by commas in ascending order)

From the numbers 21, 22, 23, 25, 27, 29, choose one which is:(a) even b) a multiple of 9 c) square d) a factor of 87 e) a prime number f) a triangle number

a) even

,

b) a multiple of 9

,

c) square

,

d) a factor of 87

,

e) a prime number ,

f) a triangle number ,

The number 36 can be written as 4 products of 2's and 3's i.e.,
 $2 \times 2 \times 3 \times 3 = 36$ and 48 can be written as $2 \times 2 \times 2 \times 2 \times 3 = 48$. Write the
following numbers in a similar way. (a) 108 (b) 1944

(a) $108 =$

(b) $1944 =$

(a) Write down the prime numbers between 10 and 20 (b) Write
down the first three multiples of 15 (c) Write down the factors of
49

(a) ,

(b) ,

(c)

Here is the start of a number pattern: 1 4 7 10 13 16 (a) prime
numbers (b) Write down the next 2 numbers in the pattern (c) What
is the largest number in the pattern which is less than 40?

(a)

(b) and

(c)

Here is the start of a number pattern: 1 4 7 10 13 16, From the
numbers in the list above, write down (a) factors of 8 (b) the
product of 2 and 5

(a)

(b)

In this question, $S(n)$ is the sum of all the positive factors of the positive integer n , including 1 and n . For example $S(6)=1+2+3+6=12$. Find $S(169)$

- ☐ 183
- ☐ 182
- ☐ 184
- ☐ 179

Olly thinks of a positive whole number. When he divides 60 by his number, the answer is also a whole number. How many different numbers could Olly have thought of?

- ☐ 12
- ☐ 11
- ☐ 10
- ☐ 13

The prime factorisation of 60 is $2 \times 2 \times 3 \times 5$. What is the prime factorisation of 56?

- ☐ $2 \times 2 \times 2 \times 7$
- ☐ 8×7
- ☐ $2 \times 2 \times 7$
- ☐ 2×7

Here are some factors of 28: 1 2 4 14 28 .A perfect number is a special type of number. If you add up all its factors and halve the total, the result is the original number.

Find a perfect number which is less than 10

- ☐ 6
- ☐ 5
- ☐ 7

Here are some factors of 28: 1 2 4 14 28 (a) Write down the missing factor of 28. (b) write down a factor of 28 which is also a prime number. (c) write down a factor of 28 which is also a square number.

- (a) ,
- (b) ,
- (c) ,

(a) Write down all the prime numbers between 10 and 20 (b) Write down the first three multiples of 12 (c) Write down all the factors of 16

- (a) ,
- (b) ,
- (c) ,

What is the smallest number that 3, 4, and 10 all go into?

- ☐ 70
- ☐ 65
- ☐ 75
- ☐ 60

Two numbers X and Y (where Y is bigger than X), have a Highest Common Factor of X. What is the Lowest Common Multiple of X and Y?

- ☐ Y
- ☐ 2Y
- ☐ XY
- ☐ X2

☐ Y2

Here is a list of numbers 5,8,9,11,12,13,17,18,20. How many numbers in the list are multiples of 3?

☐ 0

☐ 1

☐ 2

☐ 3

☐ 4

What is the biggest number that divides into 16, 32, and 56?

☐ 16

☐ 8

☐ 32

☐ 56

A factor tree can be used to write any number as a product of prime factors. We can say that $180 = 2 \times 2 \times 3 \times 3 \times 5$ (The order of the numbers does not matter) Use a factor tree, or any other method you know, to write 420 as a product of prime factors.

☐ $2 \times 2 \times 3 \times 5 \times 7$

☐ $2 \times 3 \times 5 \times 7$

☐ $3 \times 5 \times 7$

☐ $2 \times 2 \times 3 \times 5$

A two-digit number is called a multisum if it is a multiple of the sum of its digits. So 84 is a multisum since $8 + 4 = 12$ and 84 is a

multiple of 12. Work out and write down all the numbers between 20 and 30 which are NOT multisums

- ☐ 22,23,25,26,28,29
- ☐ 23,25,26,28,29
- ☐ 22,23,25,26,28
- ☐ 22,23,25,28,29

The 'Blast' of a two-digit number is obtained as follows: The Blast of 63 is 216 because $6 \times 6 \times 6 = 216$ and the Blast of 27 is 128 because $2 \times 2 \times 2 \times 2 \times 2 \times 2 = 128$ (a) Write down the Blast of the two digit number 34 (b) Which two digit number has a Blast of 125

- (a) ,
- (b)

The 'Blast' of a two-digit number is obtained as follows: The Blast of 63 is 216 because $6 \times 6 \times 6 = 216$ and the Blast of 27 is 128 because $2 \times 2 \times 2 \times 2 \times 2 \times 2 = 128$ (a) Work out another two digit number which has the same Blast as 24 (b) A particular two digit number is Blasted and then that answer is also Blasted. If the final answer is 9, what was the original number?

- (a) ,
- (b)

You have a set of cards numbered 1 to 40 inclusive. On each number that is a factor of 100, you draw a star. On each number that is a multiple of 4, you draw a circle. What is the probability of selecting a card that has both a star and a circle drawn on it? Give your answer as a fraction in its simplest form.

- ☐ $\frac{1}{40}$
- ☐ $\frac{1}{20}$
- ☐ $\frac{1}{25}$
- ☐ $\frac{1}{30}$

Jack is thinking of a number between 1 and 50, it is a square number, it is also an odd number and a factor of 50. The number is NOT 1. What is the number Jack was thinking of?

- ☐ 25
- ☐ 9
- ☐ 49

Imran notices that when he takes the digits of the number 652 and multiplies them together he gets 60. (a) How many three digit numbers are there whose digits multiply to give 60? (b) What's the biggest three-digit number whose digits multiply together to give 40?

(a)

(b)

Select all the factors of 99

- ☐ 9
- ☐ 66
- ☐ 198
- ☐ 11
- ☐ 990
- ☐ 18
- ☐ 33
- ☐ 48

Write each of the numbers 31, 32, 33, 34, 35 and 36 in the spaces below, using each number only once, to make all of the statements true.

<input type="text"/>	is a multiple of 8
<input type="text"/>	has exactly four factors
<input type="text"/>	is a square number
<input type="text"/>	is a prime number

is a factor of 105

is a multiple of 3

Select all the factors of 150

- ☐ 100
- ☐ 10
- ☐ 30
- ☐ 3
- ☐ 7
- ☐ 8
- ☐ 11
- ☐ 45

Write down one number that is both (a). Even and prime (b) Smaller than 20 and has exactly three different factors

(a)

(b)

If 5! Means $5 \times 4 \times 3 \times 2 \times 1$ and 4! Means $4 \times 3 \times 2 \times 1$ (a). Work out the value of 6! (b). Fill in the box if $3! \times 4 = \square!$ (c) Fill in the box if $3! \times 20 = \square!$

(a)

(b)

(c)

A rectangle has an area of 70cm² and a perimeter of 38cm. What is the length of the shortest side of the rectangle in cm?

- ☐ 5
- ☐ 7
- ☐ 14

The numbers 21 and 29 inclusive are to be written in the spaces below so that each number satisfies the condition given on the line where you have written it, with each number appearing only once

- a. is an even number
- b. is a factor of 144
- c. is a power of 3
- d. is a prime number
- e. has digits which differ by 1
- f. has exactly 3 factors
- g. is a multiple of 7
- h. is equal to the sum of all its factors(except the number itself)
- i. has its second digit greater than its first digit

A cuboid has faces with areas of 24 sq cm, 32 sq cm and 48 sq cm What are the lengths of its edges?(in ascending order)

<input type="text"/>	cm,
<input type="text"/>	cm,
<input type="text"/>	cm

Think of two integers that have a product of 18 and a difference that is the same as one of the two integers that you are thinking of.
(write the numbers separated by commas)

- ☐ 1,18
- ☐ 3,6
- ☐ none

Krishani draws a rectangle with an area of 12 cm² and its sides are whole number lengths. Its perimeter is 14cm. How long is the longest side in cm?

- ☐ 4
- ☐ 3
- ☐ 6
- ☐ 2

Give every prime number that goes exactly into both 12 and 18, think of factors. (write the numbers separated by commas)

- ☐ 2,3
- ☐ 3,5
- ☐ 3,7
- ☐ 2,5

Three prime numbers multiply together to get 110. What are they?(write the numbers separated by commas)

- ☐ 2,5,11
- ☐ 2,11
- ☐ 5,11
- ☐ 1,2,5,11

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