How many triangles?

Factors and HCF

WALT

Find factors.
Identify highest common factors.

Key Words:

- Highest common factor
- prime number
- cubes
- square roots
- factors
- square numbers
- multiples
- Lowest common multiple
- power
- cube roots

Key Words:

Tell us three of the key words!

Factors

What are factors?

Factors of a number are any numbers that divide into it exactly.

Factors

The factors of 16 are:

1, 2, 4, 8, and 16

NOTE: the number 1 and the number are always factors. e.g. 1 and 16

Factors

What are the factors of 25?

1, 5, and 25

<u>Factors</u>

What are the factors of 12?

1, 2, 3, 4, 6 and 12

Factors

What are the factors of 36?

1, 2, 3, 4, 6, 9 and 36

Factors

Is 13 a factor of 39?

Yes it is, 3 x 13 = 39

Fact

Interesting fact!

That's why the hours are divided into 60 minutes and minutes are divided into 60 seconds.

12 factors!

1,2,3,4,5,6,10,12,15,20,30,60

HCF

What is a highest common factor?

The Highest Common Factor of two or more numbers is the largest number that can divide the numbers without any remainder.
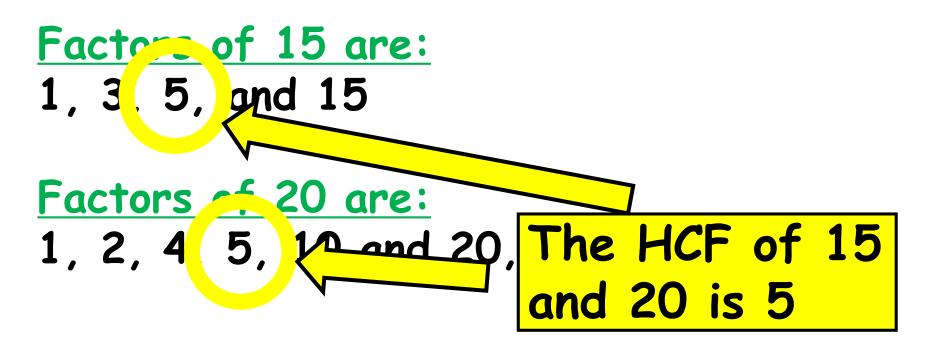
HCF

How to find the HCF of two numbers?

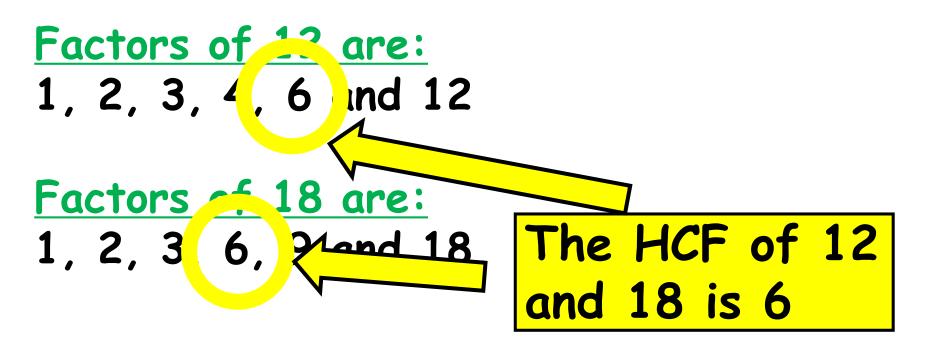We list out all the factors of each number and select the HIGHEST factor that is common to all the lists.

HCF

What is a highest common factor of 15 and 20?

Factors of 15 are:
1, 3, 5, and 15

Factors of 20 are:
1, 2, 4, 5, 10 and 20,

The HCF of 15 and 20 is 5

HCF

What is a highest common factor of 12 and 18?

Factors of 12 are:
1, 2, 3, 4, 6 and 12

Factors of 18 are:
1, 2, 3, 6, 9 and 18

The HCF of 12 and 18 is 6

Question:

What is the HCF of 16 and 40?

Answer:

The factors of 16 are:
1, 2, 4, 8 and 16

The factors of 40 are:
1, 2, 4, 5, 8, 10, 20 and 40

So the HCF of 16 and 40 is 8

HCF

Why are we never asked to find the LOWEST common factor?

Because the answer would ALWAYS be the number 1

The number 1 is a factor of EVERY number!

PLENARY

- What is a factor?

- How would you find the HCF?