

Factors

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Remember: the factors of a whole number are those whole numbers that divide exactly into it, without leaving a remainder.

When you say your tables you say loads of factors.

For example: the factors of 8 are 1 and 8 and 2 and 4 because

$1 \times 8 = 8$ and $2 \times 4 = 8$. Usually we put them in order and say the factors of 8 are 1, 2, 4 and 8



So, how do you find all the factors of a number? Just follow the points below to find all the factors of 50.

1. Start with 1 and 50 because $1 \times 50 = 50$. One and the number itself will always be factors.

(1, 50)

2. Then see if 2 will divide exactly into 50. $2 \times 25 = 50$, so yes it does! 2 and 25 are also factors of 50.

(1, 2, 25, 50)

3. Then try 3. No, 3 does not divide into 50 without leaving a remainder.

4. Carry on, one number at a time, 4 being next. No, 4 does not divide exactly into 50.

5. 5 will divide exactly as $5 \times 10 = 50$.

(1, 2, 5, 10, 25, 50)

6. 6, 7 and 8 will not divide exactly into 50 and I am going to stop here.

Why? Because 8×8 is 64, which is more than 50 and we have already covered all numbers below 8.

The factors of 50 are: (1, 2, 5, 10, 25, 50)

Find the factors of these numbers:

1. 10

2. 15

3. 12

4. 30

5. 13

6. 25

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Remember, when finding the factors of a number start at 1, then 2, then 3 and so on.

A number which only has 1 and itself as factors is called a **prime number!**

Find the factors of these numbers:

1. 18

2. 23

3. 40

4. 81

5. 24

6. 19

7. 45

8. 31

Circle the numbers between 2 and 9 that are prime numbers? (A prime number only has factors of 1 and itself.)

2

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Answers

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1. The factors of 10 are: 1, 2, 5 and 10
2. The factors of 15 are: 1, 3, 5 and 15
3. The factors of 12 are: 1, 2, 3, 4, 6 and 12
4. The factors of 30 are: 1, 2, 3, 5, 6, 10, 15 and 30
5. The factors of 13 are: 1 and 13
6. The factors of 25 are: 1, 5 and 25

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1. The factors of 18 are: 1, 2, 3, 6, 9 and 18
2. The factors of 23 are: 1 and 23
3. The factors of 40 are: 1, 2, 4, 5, 8, 10, 20 and 40
4. The factors of 81 are: 1, 3, 9, 27 and 81
5. The factors of 24 are: 1, 2, 3, 4, 6, 8, 12 and 24
6. The factors of 19 are: 1 and 19
7. The factors of 45 are: 1, 3, 5, 9, 15 and 45
8. The factors of 31 are: 1 and 31

The numbers 2, 3, 5, 7 circled