Abbots Ripton C of E Primary School

Times Tables System Parent Guide

Why are times tables important?

Knowing times tables facts is crucially important to your child's progression in their mathematics education. Without a thorough understanding of multiplication and division facts, children frequently find mastering problem solving including fractions and any multiplication or division with larger numbers very challenging. Many mental maths calculations require quick recall of multiplication and division facts.

Children who are secure in their times tables knowledge are able to master trickier tasks much more quickly and are far more successful.

It is worth explaining what we mean by 'knowing' times tables. A child who knows their times tables will be able to recall any of the multiples of a times tables out of order within 3 seconds, as well as knowing the corresponding division facts i.e. 4 x 6 = 24 as well as 24 ÷ 6 = 4.

Learning multiplication facts and tables are best done in collaboration with school, parents/carers and children. In school we regularly spend time learning times tables, but a child will be much more successful if they practise outside school independently and alongside parents/carers.

Which times tables should my child know?

Below are the times tables which your child should know as a minimum by the end of each academic year. This is line with the national curriculum expectations.

- Reception: when counting objects, children should be able to group in twos, fives and tens and record the total.
- Year 1: record sequences of twos, fives and tens (e.g. 2, 4, 6, 8 etc.) and identify any missing multiples. Know by heart the doubles and halves of numbers to 12. Draw and use arrays to solve multiplication problems.

-

By the end of year 2	By the end of year 3	By the end of year 4	By the end of year 5	By the end of year 6
2, 5, 10 including division facts	2, 3, 4, 5, 8, 10 including division facts	All times tables up to 12 x 12 with division facts	As year 4 and related questions e.g. 1/9 of 63 is 7. Knowledge of prime numbers to 19.	As year 5 and a knowledge of prime numbers below 100. Identify common factors and multiples

Times tables are not necessarily taught in order from 1-12. For example, the eight times table is often learnt after the four times table since doubling the multiple gives the multiples of 8.

Key Vocabulary

Here are some words that may be used whilst learning and applying multiplication and division.

multiply   divide   prime
product   once, twice, three times
lots of   repeated addition   times
factors   array, row, column   double
repeated subtraction   multiple
sets of   remainder   halve
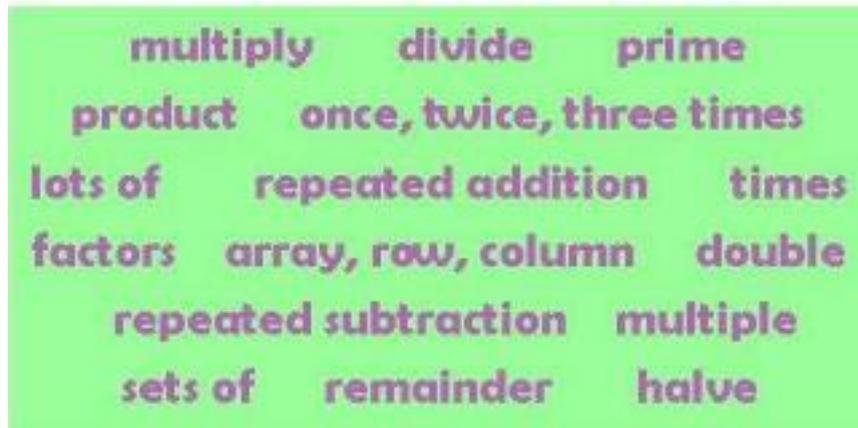
Here are some of the trickier words defined:

Factor – one number is a factor of another if it divides or 'goes into' it exactly (without any left over, a remainder). E.g. 6 is a factor of 30 because it goes into it 5 times, but not a factor of 33 because after dividing there is a remainder of 3.

Groups of/lots of/ sets of – 3 groups of 5 are 15, 3 lots of 5 are 15 and 3 sets of 5 are 15 (3 x 5 = 15).

Multiple – these are numbers that you find in a times table. E.g. 20 is a multiple of 5, 4, 2 and 10 because it is found in all those times tables.

Product – a product is the answer you get when you multiply two or more numbers together. E.g. the product of 3 and 4 is 12 (3 x 4 = 12).

Prime – a prime number will only divide equally between one and itself e.g. 7, 11.

Array – as shown, an array is a visual representation of multiplication. Shown are 3 rows of 5 with 15 in total so 3 x 5 = 15.

How will my child be tested?

Children will be tested in school **once a week**. All children will begin at the bronze award and will work at their own pace through each award (bronze, silver, gold and platinum).

Bronze: children will be able to say and record, without hesitation their times tables in order from 1 – 12.

Silver: children will be able to say and record, without hesitation their times tables in a random order within each times table.

Gold: children will be able to say and record, without hesitation their times tables in a random order.

Platinum: children will be able to say and record, without hesitation the associated division facts for their times tables e.g. 24 ÷ 6 = 4.

In order for children to move onto the next award they must demonstrate a secure knowledge within that award. Children will be expected to answer all questions correctly, in a certain amount of time before they move onto the next award.

KS1:
Children will focus on recalling their 2, 5 and 10 times tables. Children will have 5 minutes to complete their test.

KS2:
Children will focus on recalling all of their times tables. Children will have 10 minutes to complete their test.

Human Calculator

If your child completes all of the awards then they will move onto the 'Human Calculator' award.

The 'Human Calculator' award will focus on multiplication problems involving decimals and fractions. Children will work through the 'Human Calculator' in the same way as the previous awards. However the calculations will be generated by the child's class teacher.

Example:

0 x 0.25 = 0	0 x ¾ = 0
1 x 0.25 = 0.25	1 x ¾ = ¾
2 x 0.25 = 0.5	2 x ¾ = 1 ½
3 x 0.25 = 0.75	3 x ¾ = 2 ¼
4 x 0.25 = 1	4 x ¾ = 3
5 x 0.25 = 1.25	5 x ¾ = 3 ¾
6 x 0.25 = 1.5	6 x ¾ = 4 ½
7 x 0.25 = 1.75	7 x ¾ = 5 ¼
8 x 0.25 = 2	8 x ¾ = 6
9 x 0.25 = 2.25	9 x ¾ = 6 ¾
10 x 0.25 = 2.5	10 x ¾ = 7 ½
11 x 0.25 = 2.75	11 x ¾ = 8 ¼
12 x 0.25 = 3	12 x ¾ = 9

How can I help my child at home?

The key to learning times tables is frequent repetition and regular revision. 5 to 10 minutes every day is better than an hour a week. Here are some ideas to help your child learn their multiplication and division facts:

Chanting

When beginning to learn times tables this is key. Repeatedly reading a times tables out loud will help your child to become familiar with the multiples for that times tables. Try and keep a rhythm, changing vocabulary regularly (two times three is six, two threes are six, two lots of three are six etc.). Clapping or marching may help with keeping the rhythm going.

Flash Cards

Make a set of cards for the times table being learned, by putting a question on one side of the card and the answer on the reverse. Go through the cards reading the questions and then turning over to see the answer. Try and say the answer before you turn it over. When familiar with the multiplication table, the cards can then be shuffled and used in a random order.

Testing and Timing

Make this fun! When you child has become more confident with a particular times table, ask them questions and see how many they can get correct in a particular time. Alternatively write some questions out of order and get them to time how long it takes to complete the questions. Can they beat their time and score?

Multiplication Square

A multiplication square is particularly useful for establishing the link between multiplication and division facts but can be used instead of a times tables list. Time your child to complete their square, or see how many multiples they can complete in a set time. Can they beat their score or time?

Times Table Games

Bingo is a great way of learning times tables as a family. Write 6 multiples from a particular times table down in a grid and the caller reads out questions from the same multiplication table.

Dice/Card game

Rolling dice and multiplying the numbers together is a good way to compete with each other to get the correct answer. Two dice can be rolled at once to create a question. A similar game can be created with playing cards where two cards are chosen and their values multiplied together. The Jack, Queen and King need to be 11, 12 and 0.

Cross out game

To help with division, each player chooses and writes down five of the following numbers 4, 5, 6, 8, 9, 12, 15, 20, 30, 50. Take it in turns to roll a dice and if the number you roll is a factor of one of your numbers, cross is out. E.g. if a 4 is rolled it goes into 8 so cross out 8. If a 1 is rolled, you miss a go; if a 6 is rolled you get an extra turn. The winner crosses all of their numbers out first.

Online Resources

There are many free multiplication and division games available online. Here are a few places to get you started:

http://www.woodlands-junior.kent.sch.uk/maths/timestable/interactive.htm

http://www.teachingtables.co.uk/

http://www.maths-games.org/times-tables-games.html

http://www.primarygames.co.uk/

Cool times tables songs (especially 3, 6 & 8)

https://www.youtube.com/user/MrDeMaio7/videos

There are also a number of apps:
- Squeebles Times Tables
- Times Tables Kids
- Monster Maths
- Maths Loops
- Times Tables Rockstars

Quick Questions Anywhere!

A few questions here and there are much better than lots in one go. Ask:
- On the way to school.
- At the dinner table
- Whilst getting dressed/having a bath.
- A few before bed.

During the tests children will be expected to recall each times table fact at speed and get all the questions right. Please don't be disappointed if your child does not move onto the next award on the first attempt.

It is far more valuable that your child spends time properly learning each times table so that it is engrained in their learning rather than 'just' passing a test and forgetting what they have learnt.
Please don't be too eager – all children will progress in their own time.

The aim of the Times Tables Awards scheme is to help and motivate children to learn their times tables and to make the recall of their times tables second nature. Although we obviously want children to have fun and achieve as many of the awards as they can, consolidating their knowledge is our main goal. The way the scheme is set up tries to ensure this.

Please speak to your child's teacher if you have any questions.