**Rapid Recall Skills**

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**Set E**

**Recall multiplication and division facts in 7x table.**

* Chant the 7 times tables. Say the whole fact (2 times 7 equals 14) rather than just count in sevens.
* Shuffle the number cards 0-9, pick one without looking. Your child needs to tell you 7 times that number within 3 seconds. (e*.g. If the card says 5 the child must reply 5 times seven equals 35).*
* Roll a dice. Child then tells you seven times that number.
* Roll 2 dice. Add number of dots together then multiply that number by 3. *(eg. Roll a 6 and a 3. Add them together to get 9. Then multiply 9 by 7 to get 63.)*
* *Each multiplication fact has division facts linked to it.*

 *Eg. 3x7=21 so 21 divided by 3 = 7 and 21 divided by 7 = 3*

*When your child knows their multiplication facts really well start to link in division facts.*

*Eg. How many sevens are there in 21? I have 35sweets and I share them between 7 people. How many will they each get?*

*42 divided by 7?*

**Recall multiplication and division facts in 9x , 11x, 12x tables.**

* Repeat the above process for each times table.

**Add/subtract mentally two 2-digit numbers.**

* Roll 2 dice to create a 2 digit number. Roll again to create another 2 digit number. Write down the numbers then add them together. Maybe you could challenge each other. See who is faster.
* Repeat the process but this time subtract the numbers.

Remember, we are looking to develop rapid recall skills so remind children about using the number bonds they already know.

**Double of halve any number up to 100**

* Turn over 2 number cards to create a 2 digit number. Child tells you the double. To begin with they may need to partition the number, double each bit and then add it together. *Eg. Double 73 is the same as double 70 and then double 3. Remind child to think about double 7 then double 70.*
* Make a 2 digit **even** number. (Number ends in 0,2,4,6,8). Child then halves the number. Again they may need to partition the number and halve each bit*. Eg. Half 74 is the same as half 70 plus half 4 which is 35 plus 2=37.*
* Make a 2 digit **odd** number. (Number ends in 1,3,5,7,9). Child then halves the number. Again they may need to partition the number and halve each bit*. Eg.Half 75 is the same as half 70 and half 5 which is 35 plus two and a half =37½ or 37.5*

**Recall multiplication and division facts up to 12x12**

* Chant the tables
* Ask a mixture of multiplication questions from these tables.

 *eg. 3 times 5, 6 times 12, product of 8 and 7, 7 multiplied by 9*

* Ask a mixture of division questions from these tables. Eg. How many threes in 18? What is 45 divided by 5? 8 packets of sweets fit into a box. How many boxes will I need for 64 packets?

**Know square numbers up to 144** (eg 4 squared: 42=4x4=16)

* A square number is the answer when a number is multiplied by itself.

1x1=**1** 2x2=**4**  3x3=**9**  4x4=**16** 5x5=**25**

6x6=**36** 7x7=**49** 8x8=64 9x9=**81** 10x10=**100**

11x11=**121** 12x12=**144**

* So the square numbers are **1,4,9,16,25,36,49,64,81,100,121,144**

**Know corresponding square roots.** (eg square root of 16:√16 =4)

* The square root of a number is the number you multiply by itself to get the square number. It is the inverse (opposite) of the square number.

*Eg. The square root (****√****)of 16 is 4 because 4x4 =16. √144 = 12*

**Multiply and divide any number by 10/100/1000.**

* When we multiply by 10 the number gets 10 times bigger, so all the digits move one place to the left in the number. Eg 3x10=30. The 3 units move one place to the left to become 3 tens. We then put in a zero to hold the place for the units. The job of the zero is to be a ‘place holder’.
* When we multiply by 100 the number gets 100 times bigger so all the digits move 2 places to the left. Eg. 3x100=300. The 3 units move two places left to become hundreds and we put in the two zeros as place holders.
* When we divide, the numbers get smaller so all the digits move to the right. 30÷10=3. 3 tens move one place right to become 3 units.
* **HINT:** The number of places we move the digits is the same as the number of zeros in the number. Ten has one zero, so move one place. Hundred has two zeros so move two places etc

Multiply: Move to the left← Divide: Move to the right→

* Call out numbers for your child to multiply and divide by 10/100/1000. Include decimals numbers as well.

**Know common factors**

* A factor is a number which divides evenly into another number. Eg The factors of 10 are 1,10,2,5.
* Link this with knowing times tables/division facts. Ask your child to list the factors of a chosen number. It is best to do this in a systematic way.

Eg Factors of 36

Start with 1, its partner will be 36 as 1x36=36 so both these numbers are factors of 36.

2 will be a factor as 36 is an even number; so 2x18 …3x12, 4x9, 6,6

**So the factors of 36 are 1,36, 2,18, 3,12,4,9,6**

**Know prime numbers up to 19**

* Prime numbers have only 2 factors. The number one and the number itself. Eg 5 is a prime number as only 1 and 5 will divide into it evenly.
* Learn the prime numbers to 19 **2,3,5,7,11,13,17,19**

**Know common fractions/decimals/percentages.**

|  |  |  |
| --- | --- | --- |
| Fraction | Decimal | Percentage |
| 1/2 | 0.5 | 50% |
| 1/4 | 0.25 | 25% |
| 1/3 | 0.33 | 33% |
| 1/5 | 0.2 | 20% |
| 1/8 | 0.125 | 12.5% |
| 1/10 | 0.1 | 10% |
| 1 | 1 | 100% |

**Know pairs of numbers with a sum of 1.** (Two numbers which total one)

* Link this to number pairs to 10. We know 6+4=10 so 0.6+0.4=1
* Call out one of these numbers:-0.1,0.2,0.3,0.4,0.5,0.6,0.7,0.8,0.9. Child has to give number which will add to it to make 1.

**Know tests of divisibility.** A number is divisible by:-

* 100 if the last two digits are 00
* 25 if the last two digits are 00,25,50,75
* 10 if the last digit is 0
* 2 if the last digit is 0,2,4,6,8
* 3 if the digits add up to 3,6 or 9
* 4 if the last two digits are divisible by 4
* 5 if the last digit is a 0 or a 5
* 6 if the number is even and the digits add up to 3,6 or 9
* 8 if the last 3 digits are divisible by 8
* 9 if the digits add up to 9.

**Useful websites:**

* <http://www.crickweb.co.uk/ks2numeracy>
* <http://www.topmarks.co.uk/Interactive>
* <http://uk.ixl.com/math/year-5>
* <http://resources.woodlands-junior.kent.sch.uk/maths>
* Search for **‘ks2 maths websites’** or be more specific eg **’8 times tables games**’ or **addition and subtraction interactive games**.
* Log into www.mymaths.co.uk