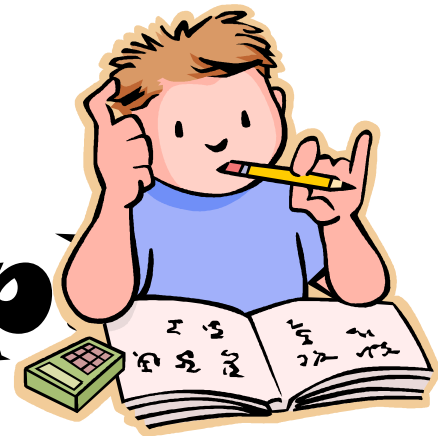


Multiplication and Division

Rules to help



Multiplication and

Division are opposites

See the Family of Facts:

$$4 \times 3 = 12$$

$$12 \div 3 = 4$$

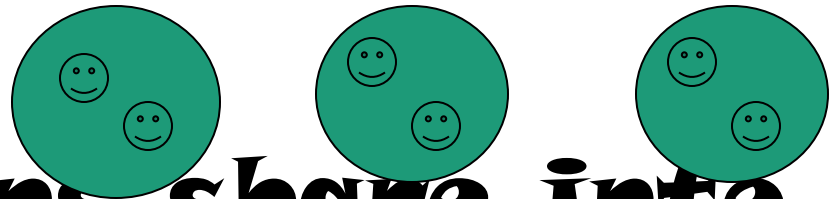


It's all about Groups

Multiplication means

groups of

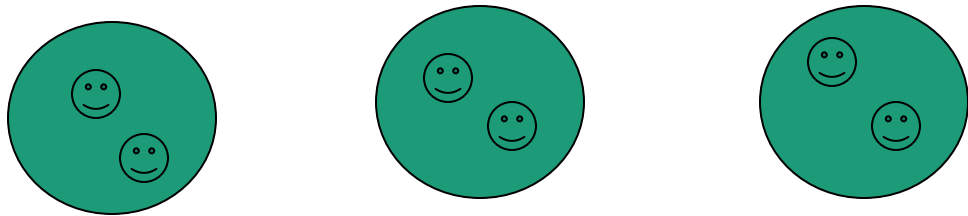
e.g. 3×2 means 3 groups of 2



Division means share into

e.g. $6 \div 3$ means 6 shared into 3 groups

groups



Multiplying by 0

When you multiply by 0
the answer is always 0

e.g. $4 \times 0 = 0$



e.g. $57,000 \times 0 = 0$

Multiplying by 1

e.g. $35 \times 1 = 35$

**When you multiply a number by 1,
the answer is always the same as
the number**

e.g. $23,000 \times 1 = 23,000$

e.g. $5 \times 1 = 5$

e.g. $3 \times 1 = 3$

Multiplying by 2

Multiplying by 2 is the same as Doubling or adding the number to itself

e.g. $5 \times 2 = 10$

Double 5 is 10

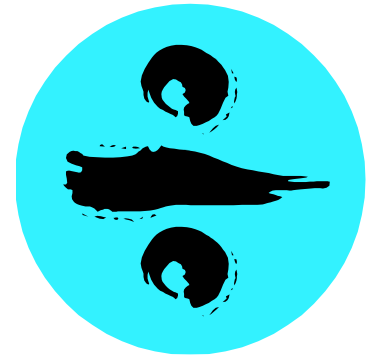
$5 + 5 = 10$

Dividing by 2

When you divide by 2 it is
the same as halving the
number

e.g. $50 \div 2 = 25$

Half of 50 is 25



Multiplying by 4

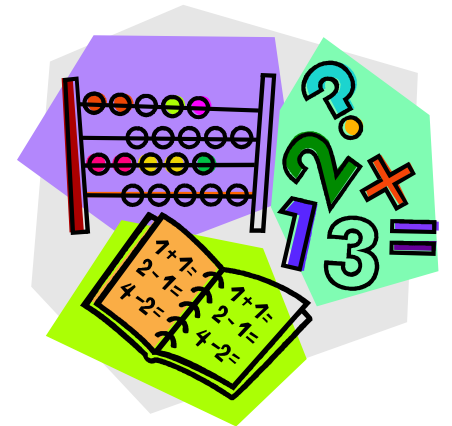
If you want to quickly
multiply a number by 4,
then just double it

twice!

e.g. $6 \times 4 = 24$

double 6 is 12

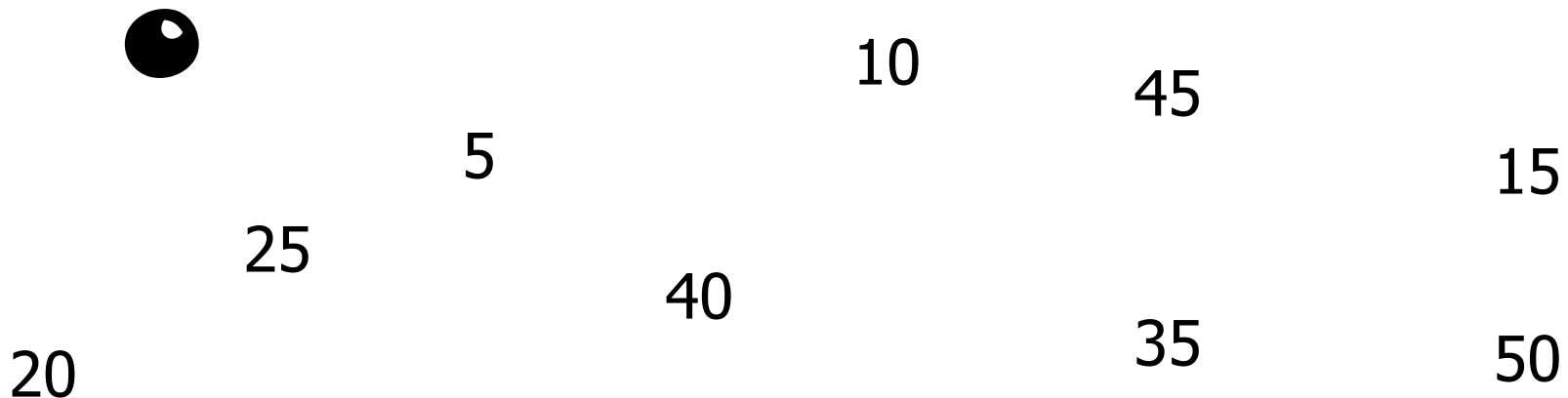
double 12 is 24



Multiplying by 5

30

The 5 times table is easy to learn, if you remember that all answers end in a 5 or a 0



Multiplying by 10

When you multiply by 10,
all the digits move 1
place to the left and a 0
is added.

X 10

2	3
20	30
200	300
2000	3000

X 10

Have a go



Core Task

1 How much money?



p

2 How much money?




p

3 How many 10p coins make 50p?



coins

4 Sweets cost 5p each.
How many can you buy for 20p?



5p sweets

5 $4 \times 2 = \square$

6 $\square \times 5 = 15$

7 $6 \div 2 = \square$

8 $5 \times \square = 35$

9 $10 \div 2 = \square$


10 $10 \times 7 = \square$

11 $30 \div 5 = \square$

12 $10 \times 9 = \square$


13 $\square \times 5 = 45$

14 There are 25 children in a class. They are put into groups of 5. How many groups are there?



groups

15 I have 18p in my pocket. I only have 2p coins. How many 2p coins do I have?



coins

Mental Multiplication

Stretch Task

Try using these mental calculation strategies to see how many of these calculations you can perform mentally.

x4

Double the number and then double it again.

e.g. $13 \times 4 = 13 \times 2 = 26 = 26 \times 2 = 52$

x5

Multiply the number by 10 and then half it.

e.g. $14 \times 5 = 14 \times 10 = 140 \div 2 = 70$

x8

Double the number, double it again and then double it a third time.

e.g. $13 \times 8 = 13 \times 2 = 26 \times 2 = 52 \times 2 = 104$

x9

Multiply the number by 10 and then subtract the number.

e.g. $15 \times 9 = 15 \times 10 = 150 - 15 = 135$

x11

Multiply the number by 10 and then add the number.

e.g. $7 \times 11 = 7 \times 10 = 70 + 7 = 77$

x15

Multiply the number by 10 and then add half of the total.

e.g. $12 \times 15 = 12 \times 10 = 120 \div 2 = 60 + 120 = 180$

- $14 \times 4 =$
- $13 \times 5 =$
- $6 \times 8 =$
- $8 \times 9 =$
- $9 \times 11 =$
- $6 \times 15 =$
- $15 \times 4 =$
- $9 \times 5 =$
- $12 \times 8 =$
- $13 \times 9 =$
- $10 \times 11 =$
- $3 \times 15 =$
- $15 \times 4 =$
- $20 \times 5 =$
- $5 \times 8 =$
- $12 \times 9 =$
- $13 \times 11 =$
- $8 \times 15 =$
- $4 \times 8 =$
- $9 \times 15 =$
- $11 \times 15 =$
- $14 \times 8 =$

