

HORTON CE VA DIVISION GUIDELINES

Year One

Sharing

Requires secure counting skills
-see counting and understanding number strand
Develops importance of one-to-one correspondence
See appendix for additional information on x and ÷ and aspects of number

Sharing – 6 sweets are shared between 2 people. How many do they have each?



Practical activities involving sharing, distributing cards when playing a game, putting objects onto plates, into cups, hoops etc.

Grouping

Sorting objects into 2s / 3s/ 4s etc
How many pairs of socks are there?



There are 12 crocus bulbs. Plant 3 in each pot. How many pots are there?
Jo has 12 Lego wheels. How many cars can she make?

Year Two

÷ = signs and missing numbers

$$6 \div 2 = \square \quad \square = 6 \div 2$$

$$6 \div \square = 3 \quad 3 = 6 \div \square$$

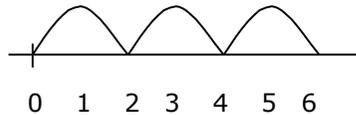
$$\square \div 2 = 3 \quad 3 = \square \div 2$$

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Grouping

Link to counting and understanding number strand
Count up to 100 objects by grouping them and counting in tens, fives or twos;...
Find one half, one quarter and three quarters of shapes and sets of objects
6 ÷ 2 can be modelled as:
There are 6 strawberries.
How many people can have 2 each? How many 2s make 6?

6 ÷ 2 can be modelled as:



In the context of money count forwards and backwards using 2p, 5p and 10p coins

Practical grouping e.g. in PE

12 children get into teams of 4 to play a game. How many teams are there?



Year Three

÷ = signs and missing numbers

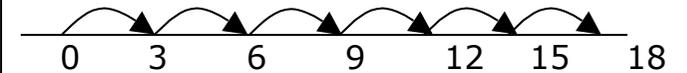
Continue using a range of equations as in Year 2 but with appropriate numbers.

Understand division as sharing and grouping

18 ÷ 3 can be modelled as:
Sharing – 18 shared between 3 (see Year 1 diagram)

OR

Grouping - How many 3's make 18?



Remainders

16 ÷ 3 = 5 r1
Sharing - 16 shared between 3, how many left over?
Grouping – How many 3's make 16, how many left over?
e.g.



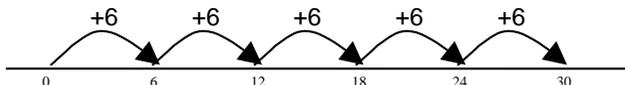
Year Four

÷ = signs and missing numbers

Continue using a range of equations as in Year 2 but with appropriate numbers.

Sharing and grouping

30 ÷ 6 can be modelled as:
grouping – groups of 6 placed on no. line and the number of groups counted e.g.



sharing – sharing among 6, the number given to each person

Remainders

41 ÷ 4 = 10 r1



41 = (10 x 4) + 1

Pencil and paper procedures- Chunking.

72 ÷ 5 lies between 50 ÷ 5 = 10 and 100 ÷ 5 = 20

* Partition the dividend into multiples of the divisor:

e.g. 72 = 50 + 22

50 ÷ 5 = 10

22 ÷ 5 = 4r2 → 10 + 4r2 = 14 r 2

OR

$$\begin{array}{r} 72 \\ - 50 \quad (10 \text{ groups}) \\ \hline 22 \\ - 20 \quad (4 \text{ groups}) \\ \hline 2 \end{array}$$

Answer : 14 remainder 2

Year Five

Sharing and grouping

Continue to understand division as both sharing and grouping (repeated subtraction).

Remainders

Quotients expressed as fractions or decimal fractions

61 ÷ 4 = 15 ¼ or 15.25



Pencil and paper procedures- Chunking

256 ÷ 7 lies between 210 ÷ 7 = 30 and 280 ÷ 7 = 40

* Partition the dividend into multiples of the divisor:

e.g. 256 = 210 + 46

210 ÷ 7 = 30

46 ÷ 7 = 6r4 → 30 + 6r4 = 36r4

OR

$$\begin{array}{r} 256 \\ - 210 \quad (30 \text{ groups}) \\ \hline 46 \\ - 42 \quad (6 \text{ groups}) \\ \hline 4 \end{array}$$

Answer: 36 remainder 4

Also, Short Division for More Able Children

$$5 \overline{) 16847}$$

Considering each column starting from the left. See Year Six for full explanation.

Year Six

Sharing, grouping and remainders as Year Five

Pencil and paper procedures- Chunking

977 ÷ 36 is approximately 1000 ÷ 40 = 25

* Partition the dividend into multiples of the divisor:

e.g. 977 = 720 + 180 + 77

720 ÷ 36 = 20

180 ÷ 36 = 5

77 ÷ 36 = 2r5 → 20 + 5 + 2r5 = 27r5

OR

$$\begin{array}{r} 977 \\ - 720 \quad (20 \text{ groups}) \\ \hline 257 \\ - 180 \quad (5 \text{ groups}) \\ \hline 77 \\ - 72 \quad (2 \text{ groups}) \\ \hline 5 \end{array}$$

Answer: 27 5/36

Pencil and Paper procedures- Short Division Method

$$\begin{array}{r} \text{quotient} \\ \text{divisor } 5 \overline{) 847} \text{ dividend} \end{array}$$

Write down how many times your divisor goes into the first number of the dividend. If there is a remainder, that's okay. Write down your remainder to the left of the next digit in the dividend.

Continue. Repeat steps 1-3 until you are done.

$$5 \overline{) 169r2} \quad 5 \overline{) 847}$$

Both methods above are necessary at this stage, to deal with the wide range of problems experienced at Year Six.