

Number and Number Processes

BUILDING ON STRONG NUMBER SENSE

AREA MODELS
36x12

	30	6
10	30x10=300	10x6=60
2	30x2=60	6x2=12

300+60+60+12

432

Multiplication & Division

HOW MANY SHEETS DO WE NEED?

MAKE CONNECTIONS

THIS COULD THEN BE EXTENDED TO SOLVE 3.6×6



36 pupils x 12 pages

$36 \times 12 = (3 \times 12 \times 10) + (6 \times 12) = 360 + 72 = 432$

$36 \times 12 = (30+6) \times 12 = (30 \times 12) + (6 \times 12) = 360 + 72 = 432$

$36 \times 12 = 36 \times 2 \times 6 = 36 \times 2 \times 3 = 72 \times 2 \times 3 = 144 \times 3 = 432$

$36 \times 12 = 36 \times (10+2) = (36 \times 10) + (36 \times 2) = 360 + 72 = 432$

HOW MUCH MONEY the kids will get FROM GRANNY?

$£792 \div 6$

Firstly make the number 792

Share the 100's
THIS HAS A PARTITION OF 600



Exchange the remaining 100 for 10's.

100's x 7

10's x 9

1's x 2

Exchange the remaining 10 for 1's.

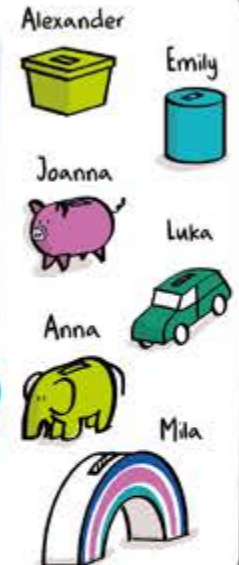


Share the 10's
THIS HAS A PARTITION OF 180

Share the 1's
THIS HAS A PARTITION OF 12



Each of the six shares is **£132**



Using a calculation like this:

24785 + 5857

20000
4 000 + 5000
700 + 800
80 + 50
5 + 7

How many different ways can learners solve this and which might be the most efficient and why? Justify your thinking.

29 000 29 700 30 500 30 630 30 642

20 000+ +700 +800 +80+50 +5+7
4 000+5 000

Addition & Subtraction

OPPORTUNITIES TO SHARE AND DISCUSS APPROACHES



Ones	Tenths	Hundredths
1, 1, 1, 1, 1	0.10, 0.10, 0.10, 0.10, 0.10	0.01, 0.01, 0.01, 0.01, 0.01
1, 1, 1, 1, 1	0.10, 0.10	

IF YOU KNOW THE ANSWER TO $5.2 + 4.56$
WHAT ELSE DO YOU KNOW?

$72 \div 6 = ?$ SELECT MOST EFFICIENT METHOD
 $6 \times ? = 72$

SOLVE BY COUNTING ON
 $£10.25 - £6.78$
 $£6.78 + £? = £10.25$



VARIETY of REPRESENTATIONS
 $12 \div 6$ $72 \div 6$ $6 \times 2 = 12$
 $60 \div 6$ $6 \times 10 = 60$

SECOND LEVEL

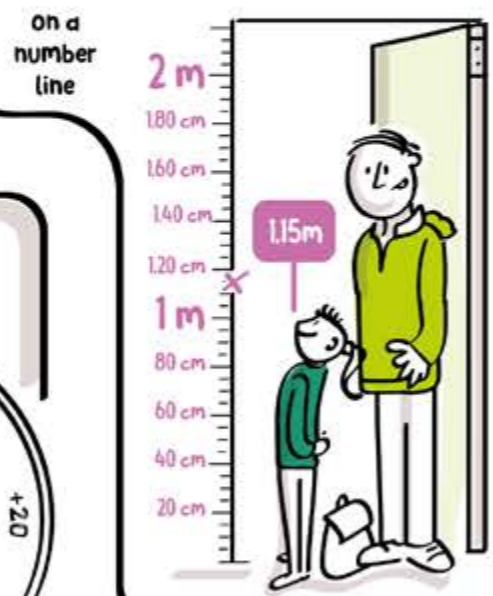
one million
one hundred thousand
ten thousand

One +... one hundred
Ten

READ, WRITE and ORDER WHOLE NUMBERS to **1000000** starting from any number in the SEQUENCE



IDENTIFYING MISSING NUMBERS



Familiar context in which negative numbers are used

