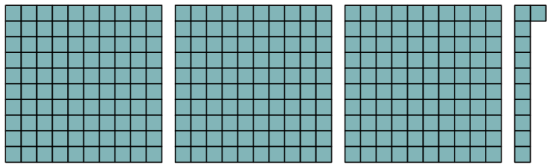
Maths, Y7 - Place Value

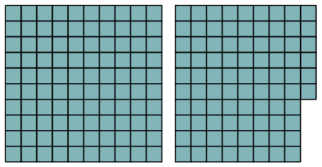
1. Ordering Whole Numbers

Which is greater 311 or 186?

Here is 311



Here is 186



When comparing numbers, always look at the hundreds first to see which number is biggest.

311 is much greater.

The 3 hundreds are more important.

2. Addition

What is 168 + 257?

$$\begin{array}{r} 1\ 6\ 8 \\ +\ 2\ 5\ 7 \\ \hline =\ 4\ 2\ 5 \\ \hline 1\ 1 \end{array}$$

168 + 257 = 425

3. Subtraction

What is 854 – 465?

$$\begin{array}{r} {\scriptstyle 7}\,{\scriptstyle 1}\,{\scriptstyle 4}\,{\scriptstyle 1} \\ 8\ 5\ 4 \\ -\ 4\ 6\ 5 \\ \hline 3\ 8\ 9 \end{array}$$

854 – 465 = 389

4. Multiplying by powers of 10

What is 5 x 10?

When 5 is multiplied by 10, it moves one place value column to the left.

We must remember to put a zero into the ones column to fill the gap.

5 x 10 = 50

What is 4 x 100?

When 4 is multiplied by 100, it moves two place value columns to the left.

We must remember to put one zero into the tens column and one zero into the ones column to fill the gaps.

4 x 100 = 400

5. Dividing by powers of 10

What is 590 ÷ 10?

Dividing is the inverse of multiplying.

When we divide by 10, the digits move one place value column to the right.

590 ÷ 10 = 59

What is 600 ÷ 100?

When we divide by 100, the digits move two place value columns to the right.

600 ÷ 100 = 6

6. Inequalities

> greater than

< less than

147 > 132

132 < 147

147 is **greater than** 132

132 is **less than** 147

7. Long Multiplication

What is 87 x 25?

To multiply by 25, multiply by **5**, then by **20** and add the answers.

$$\begin{array}{r} 8\ 7 \\ \times\ 2\ 5 \\ \hline 4\ 3\ 5 \\ {\scriptstyle 3} \\ 1\ 7\ 4\ 0 \\ {\scriptstyle 1} \\ \hline 2\ 1\ 7\ 5 \end{array}$$

Multiplying by **5**:

5 x 7 = 35

5 x 8 = 40 40 + 3 = 43

To multiply by **20**, put the 0 in the units column, then multiply by 2:

2 x 7 = 14

2 x 8 = 16 16 + 1 = 17

Then add, 435 + 1740 = **2175**

8. Long Division

What is 536 ÷ 8?

Hundreds Tens Ones

Place the numbers in a division box.

H	T	O
5	3	6

8)

First divide the number in the hundreds column.

5 divided by 8 is not possible!

Let's carry the 5 to the tens column.

H	T	O
^{5}5	3	6

We can either leave the answer space in the hundreds column empty, or we could put a *0* in there to remind us that nothing is there.

We now divide the number in the tens column.

53 divided by 8 is 6 remainder 5.

Place the 6 above the line and carry the 5 to the ones column.

H	**T**	O
	6	
^{5}5	^{5}3	^{5}6

We now divide the number in the ones column.

56 divided by 8 is 7 with no remainder.

Place the 7 above the line.

So, 536 ÷ 8 = 67

H	T	**O**
	6	**7**
^{5}5	^{5}3	^{5}6