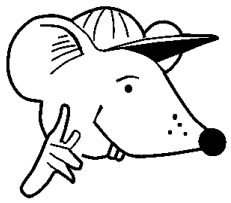
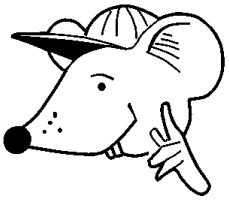


MATHEMATICS



Y6 Multiplication and Division
6370

Use formal method of long division

Equipment

Pencil, paper.

MathSphere

Concepts

Method

e.g. 867 ÷ 32
First an approximate answer.

The answer to **867 ÷ 32** is roughly the same as **900 ÷ 30 = 30**.

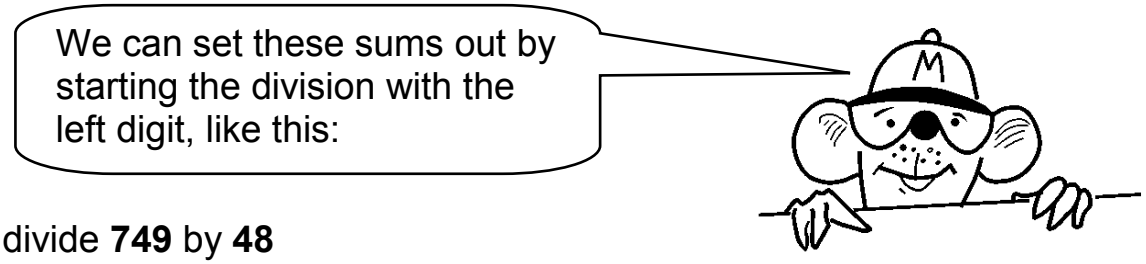
Lay the sum out in a more conventional manner, firstly taking away a tens multiple of the divisor (**32** in this case).

```
   27
32)867
  64
  227
  224
    3
```

This is equivalent to:

```
32)867
  640      (20 × 32)
  227
  224      (7 × 32)
    3  ←   Remainder
```

The answer to **867 ÷ 32** is therefore **27 remainder 3 which we can write as $27^{3}/_{32}$**



Let's divide **749** by **48**

First, the estimate: 749 ÷ 48 is roughly 700 ÷ 50 = 14

15 ← **Answer**
48)749
48
269
240
29 ← **Remainder**

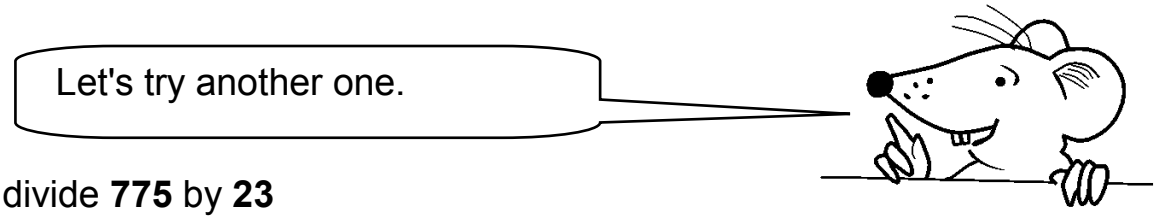
Here we see that **48** divides into **7** no times, so we see if **48** will divide into **74**.

It divides **1** time, so we write this at the top and work out the remainder, which is **26**.

Bring the **9** down to make **269** and divide this by **48**.

This divides **5** times with remainder **29**.

So, the answer is 15 remainder 29 which we write as $15^{29}/_{48}$



Let's divide **775** by **23**

First, the estimate: 775 ÷ 23 is roughly the same as 800 ÷ 20 = 40

33 ← **Answer**
23)775
69
85
69
16 ← **Remainder**

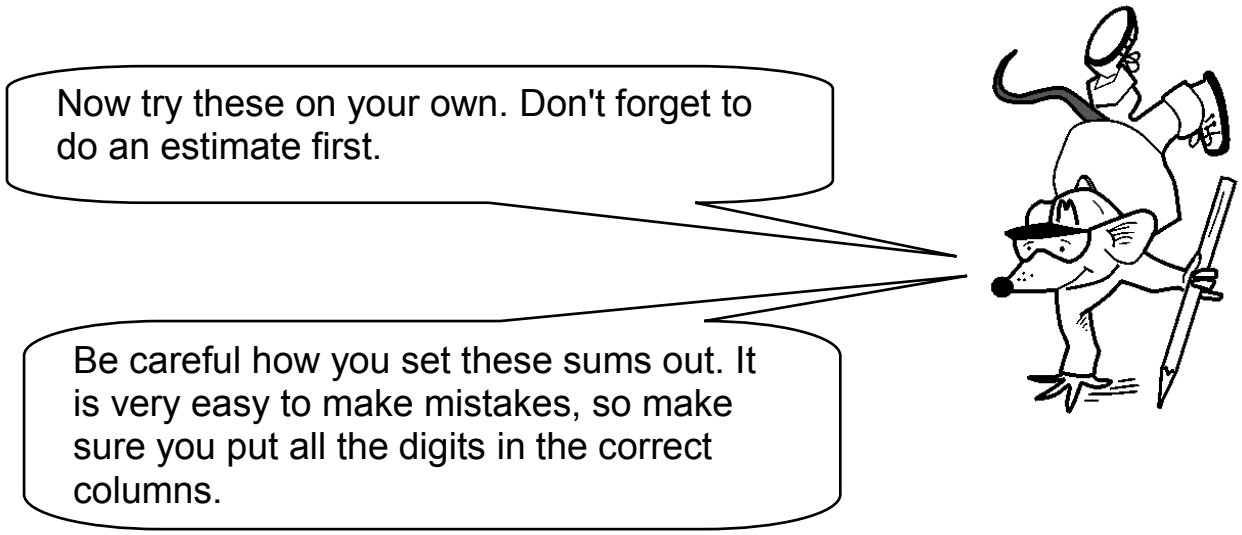
Here we see that **23** divides into **77** three times, so we put 3 in the answer space.

This leaves a remainder of **8**, so we bring down the **5** to make **85**.

23 divides into **85** three times, so we put **3** in the answer space.

This leaves a remainder of **16** and that's the end.

The answer is 33 remainder 16, which we write as $33^{16}/_{23}$



1.

a. 794 ÷ 24 **b**. 834 ÷ 45 **c.** 385 ÷ 24 **d.** 593 ÷ 14

e. 733 ÷ 43 **f.** 673 ÷ 28 **g.** 745 ÷ 35 **h.** 856 ÷ 17

i. 845 ÷ 35 **j**. 276 ÷ 41 **k.** 575 ÷ 63 **l.** 856 ÷ 23

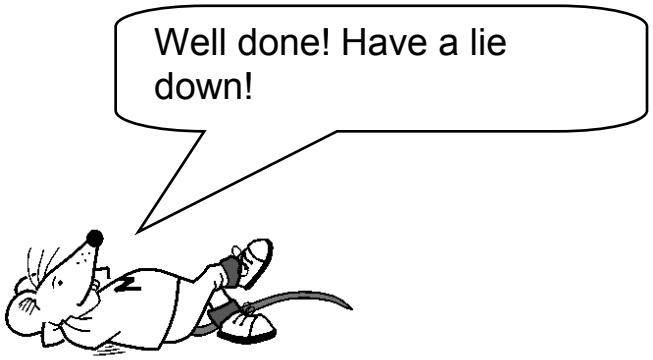
m. 544 ÷ 31 **n.** 645 ÷ 45 **o.** 573 ÷ 26 **p.** 523 ÷ 27

2.

Finally, why not try these divisions with decimals?

a. 34.4 ÷ 8 **b**. 114.5 ÷ 5 **c.** 109.2 ÷ 7 **d.** 204.6 ÷ 6

e. 44.4 ÷ 3 **f.** 257.4 ÷ 9 **g.** 306.6 ÷ 7 **h.** 155.2 ÷ 8



Answers

Page 4

1.

a. $33\frac{2}{24}$ **b.** $18\frac{24}{45}$ **c.** $16\frac{1}{24}$ **d.** $42\frac{5}{14}$

e. $17\frac{2}{43}$ **f.** $24\frac{1}{28}$ **g.** $21\frac{10}{35}$ **h.** $50\frac{6}{17}$

i. $24\frac{5}{35}$ **j.** $6\frac{30}{41}$ **k.** $9\frac{8}{63}$ **l.** $37\frac{5}{23}$

m. $17\frac{17}{31}$ **n.** $14\frac{15}{45}$ **o.** $22\frac{1}{26}$ **p.** $19\frac{10}{27}$

2.

a. 4.3 **b.** 22.9 **c.** 15.6 **d.** 34.1

e. 14.8 **f.** 28.6 **g.** 43.8 **h.** 19.4