Warning: this calculation should only be carried out by this method after lots of earlier work leading up to it!

$$
\begin{array}{r}
2\ 5 \text{ remainder } 17 \\
34\ \overline{)\ 8\ 6\ 7} \\
\underline{6\ 8} \\
1\ 8\ 7 \\
\underline{1\ 7\ 0} \\
1\ 7
\end{array}
$$

First carry out an estimate of the answer. I think 867 divided by 34 is over 20 but under 30. Then proceed using these steps:

1. How many 34s in 86?

2. 2 x 34 is 68. 3 x 34 is 102 which is too many, so it must be 2.

3. Put the 2 in the tens column above the answer.

4. Place the 68 below the 86 and subtract.

5. 86 – 68 is 18.

6. 'Bring down' the 7 to make 187.

7. How many 34s in 187.

8. By trial and improvement and some rough work multiplying 34 by my estimated numbers I find that 34 x 5 = 170.

9. Place the 170 under the 187 and subtract.

10. The remainder must be less than the original number you are dividing by.

1. $13 \overline{)406}$ 2. $11 \overline{)626}$ 3. $15 \overline{)547}$ 4. $22 \overline{)489}$

5. $31 \overline{)784}$ 6. $22 \overline{)685}$ 7. $15 \overline{)325}$ 8. $41 \overline{)975}$

9. $24 \overline{)984}$ 10. $35 \overline{)805}$ 11. $16 \overline{)256}$ 12. $42 \overline{)882}$

Working out:

Answers

1. 31 r 3   2. 56 r 10   3. 36 r 7   4. 22 r 4

5. 25 r 9   6. 31 r 3   7. 21 r 10   8. 23 r 32

9. 41   10. 23   11. 16   12. 21

Lots more like this on the MathSphere, 'It's All Figured Out' worksheet CD www.mathsphere.co.uk