Long Division: Different Methods You Can Use

Name: _____ Date: _____

What is Division?

Division means sharing or finding out how many times one number fits into another number.
Example: 20 ÷ 4 = 5
This means 4 fits into 20 exactly 5 times.

Method 1 – The Bus Stop Method (Long Division)

Example: 31443 ÷ 47

```
      6 6 9
47 | 3 1 4 4 3
     2 8 2
     -------
       3 2 4
       2 8 2
       -----
         4 2 3
         4 2 3
         -----
             0
```

Always: Divide · Multiply · Subtract · Bring down · Repeat

Method 2 – Chunking

Instead of dividing all at once, subtract large chunks.
156 ÷ 12
12 × 10 = 120
156 – 120 = 36
12 × 3 = 36
36 – 36 = 0
10 + 3 = 13
Answer = 13

Method 3 – Multiplication Table Method

For 47:
1×47=47 · 2×47=94 · 3×47=141 · 4×47=188 · 5×47=235 · 6×47=282 · 7×47=329 · 8×47=376 · 9×47=423

Now you can quickly find the biggest number that fits.

Method 4 – Estimation

31443 ÷ 47
31,500 ÷ 50 ≈ 630
The real answer is 669.
Estimating helps you know if your answer is sensible.

Try These

Easy

1. 168 ÷ 12 = _____
2. 360 ÷ 15 = _____
3. 252 ÷ 18 = _____
4. 644 ÷ 23 = _____
5. 736 ÷ 32 = _____

Medium

6. 3,276 ÷ 28 = _____
7. 5,292 ÷ 42 = _____
8. 6,552 ÷ 36 = _____
9. 8,415 ÷ 55 = _____
10. 9,216 ÷ 48 = _____

Challenge

11. 31,443 ÷ 47 = _____
12. 31,148 ÷ 52 = _____
13. 90,016 ÷ 97 = _____
14. 35,568 ÷ 52 = _____
15. 72,128 ÷ 64 = _____

Reflection

Which method did you find easiest?

☐ Bus Stop ☐ Chunking ☐ Multiplication Table ☐ Estimation

Explain why:

Answers for grown-ups

Long Division: Different Methods You Can Use

Easy

1. 168 ÷ 12 = **14**
2. 360 ÷ 15 = **24**
3. 252 ÷ 18 = **14**
4. 644 ÷ 23 = **28**
5. 736 ÷ 32 = **23**

Medium

6. 3,276 ÷ 28 = **117**
7. 5,292 ÷ 42 = **126**
8. 6,552 ÷ 36 = **182**
9. 8,415 ÷ 55 = **153**
10. 9,216 ÷ 48 = **192**

Challenge

11. 31,443 ÷ 47 = **669**
12. 31,148 ÷ 52 = **599**
13. 90,016 ÷ 97 = **928**
14. 35,568 ÷ 52 = **684**
15. 72,128 ÷ 64 = **1,127**

Worked bus stops for the Challenge sums

31,443 ÷ 47

```
      6 6 9
47 | 3 1 4 4 3
     2 8 2
     -------
       3 2 4
       2 8 2
       -----
         4 2 3
         4 2 3
         -----
             0
```

31,148 ÷ 52

```
      5 9 9
52 | 3 1 1 4 8
     2 6 0
     -------
       5 1 4
       4 6 8
       -----
         4 6 8
         4 6 8
         -----
             0
```

90,016 ÷ 97

```
      9 2 8
97 | 9 0 0 1 6
     8 7 3
     -------
       2 7 1
       1 9 4
       -----
         7 7 6
         7 7 6
         -----
             0
```

35,568 ÷ 52

```
      6 8 4
52 | 3 5 5 6 8
     3 1 2
     -------
       4 3 6
       4 1 6
       -----
         2 0 8
         2 0 8
         -----
             0
```

72,128 ÷ 64

```
      1 1 2 7
64 | 7 2 1 2 8
     6 4
     -------
       8 1
       6 4
       -----
         1 7 2
         1 2 8
         -----
           4 4 8
           4 4 8
           -----
               0
```

Reflection: open answer. Any method is fine if the child can explain why it works for them.