20.1.21   Multiplication and Division

Learning Objective:
We are learning to divide 4 digit numbers by a single digit with remainders.

I will be successful if:
- I can try different methods and reason about my preferred method.
- I can use times tables facts to help solve calculations.
- I can carry over any remaining digits.

Key Vocabulary

division
sharing
equal groups
remaining
exchange
partition
digit
remainder

Flashback 4

1) Work out $176 \div 4$

2) Work out 26×27

3) 414 apples are shared equally between 3 boxes.
How many apples are in each box?

4) $\boxed{} + 120 = 1,000$

What is the missing number?

Challenge
5) $4 \times 9 = 18 \times ?$
6) $0.71 + ? = 5 - 1$
7) $26 \times 0 = ? \times 43$
8) 50% of $50 = 25\%$ of $?$

Flashback 4

1) Work out $176 \div 4$ 44

2) Work out 26×27 702

3) 414 apples are shared equally between 3 boxes. How many apples are in each box?   138

4) $\boxed{880} + 120 = 1,000$

What is the missing number?

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Challenge
5) $4 \times 9 = 18 \times 2$
6) $0.71 + 0.29 = 5 - 1$
7) $26 \times 0 = 0 \times 43$
8) 50% of 50 = 25% of 100

Use <, > or = to make the statements correct.

3,495 ÷ 5	◯	3,495 ÷ 3
8,064 ÷ 7	◯	9,198 ÷ 7
7,428 ÷ 4	◯	5,685 ÷ 5

Will 539 divide exactly by 5? How do you know?

$$5 \overline{\smash{\big)}\, 539}$$

$$3\ 1\ 3\ 8\ \text{r}1$$
$$2\overline{)6\ 2\ 7^{1}9}$$

The amount left over at the end is shown as remainder (r).

$$2\ 5\ 4\ 9\ \text{r}2$$
$$3\overline{)7\ ^{1}6\ ^{2}4^{2}9}$$

The amount will not always be r1, but it will always be less than the number you are dividing by.

Have a go completing these now.

6 | 4 6 8 2   4 | 5 2 1 3   5 | 3 0 4 8

4 | 5 2 7 1   6 | 4 3 0 7   7 | 3 2 8 4

20.1.21   <u>Division</u>

Now complete the worksheet attached.

Reasoning challenges

Always, Sometimes, Never?

A three-digit number made of consecutive descending digits divided by the next descending digit always has a remainder of 1

$765 \div 4 = 191$ remainder 1

How many possible examples can you find?

I am thinking of a 3-digit number.

When it is divided by 9, the remainder is 3

When it is divided by 2, the remainder is 1

When it is divided by 5, the remainder is 4

What is my number?

True or False?

Divide with remainders

If you divide any number ending in a 2 or a 7 by 5, you will always get a remainder of 2

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