Updated October 2017

Year 6

Small Steps Guidance and Examples

Block 2: Four Operations

White Rose Maths

Overview

Small Steps

- Add and subtract whole numbers
- Multiply up to a 4-digit by 1-digit number
- Short division
- Division using factors
- Long division (1)
- Long division (2)
- Long division (3)
- Long division (4)
- Common factors
- Common multiples
- Primes
- Squares and cubes
- Order of operations
- Mental calculations and estimation
- Reasoning from known facts

NC Objectives

Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why.

Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication.

Divide numbers up to 4 digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context.

Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division, interpreting remainders according to the context.

Perform mental calculations, including with mixed operations and large numbers.

Identify common factors, common multiples and prime numbers.

Use their knowledge of the order of operations to carry out calculations involving the four operations.

Solve problems involving addition, subtraction, multiplication and division.

Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy.

Add & Subtract Integers

Notes and Guidance

Children consolidate their knowledge of column addition and subtraction.

They use these skills to solve multi step problems in a range of contexts.

Mathematical Talk

What happens when there is more than 10 in a place value column?
Can you make an exchange between columns?
How can we find the missing digits? Can we use the inverse?
Is column method always the best method?
When should we use our mental methods?

Varied Fluency

1 Calculate

$$\begin{array}{r} 34621 \\ +\ 25734 \\ \hline \\ \hline \end{array} \qquad \begin{array}{r} 4761325 \\ -\ 938052 \\ \hline \\ \hline \end{array}$$

67,832 + 5,258 =
834,501 – 193,642 =

2 A four-bedroom house costs £450,000
A three-bedroom house costs £199,000 less.
How much does the three-bedroom house cost?
What method did you use to find the answer?

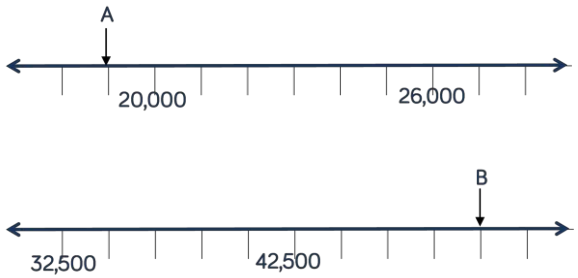
3 All the missing digits are the same. Find the missing digits

$$\begin{array}{r} 52247\square \\ +3\square 5904 \\ \hline 90\square 3\square 2 \end{array}$$

Add & Subtract Integers

Reasoning and Problem Solving

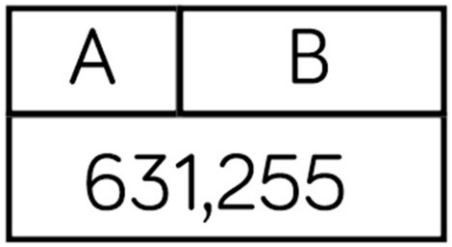
Find the difference between A and B



A = 19,000
B = 52,300

The difference is 33,300

Here is a bar model.



A is an odd number which rounds to 100,000 to the nearest ten thousand.
It has a digit total of 30

B is an even number which rounds to 500,000 to the nearest hundred thousand.
It has a digit total of 10

A and B are both multiples of 5 but end in different digits.

Possible answer:

99,255 + 532,000 = 631,255

Multiply 4-digits by 2-digits

Notes and Guidance

Children consolidate their knowledge of column multiplication.

They use these skills to solve multi step problems in a range of contexts.

Mathematical Talk

What is important to remember as we begin multiplying by the tens number?

How would you draw the calculation?

Can the inverse operation be used?

Is there a different strategy that you could use?

Varied Fluency

1 Calculate

$$\begin{array}{r} 4267 \\ \times \quad 34 \\ \hline \\ \hline \end{array} \qquad \begin{array}{r} 3046 \\ \times \quad 73 \\ \hline \\ \hline \end{array}$$

$5734 \times 26 =$

2 Lauren made cookies for a bake sale. She made 345 cookies. The recipes stated that she should have 17 chocolate chips in each cookie. How many chocolate chips will there be altogether?

3 Work out the missing number.

$6 \times 35 = \square \times 5$

Multiply 4-digits by 2-digits

Reasoning and Problem Solving

True or false.

a) 5,463 × 18 is the same as 18 × 5,463

b) I can find the answer to 1,100 × 28 by using 1,100 × 30 and taking away two lots of 1,100

c) 70 ÷ 10 = 700 ÷ 100

a) True because multiplication is commutative so the calculation can be done in any order

b) True because they both show 28 lots of 1,100

c) True because both numbers have been made 10 times bigger

2	3	4	5	7	8

Place the digits in the boxes to make the largest product.

×			

```
  8432
×   75
------
632000
------
```

Short Division

Notes and Guidance

Children build on their understanding of dividing up to 4 digits by 1 digit by now dividing by up to 2 digits. They use the short division and focus on division as grouping.

Teachers may encourage children to list the multiples of the number to help them solve the division more easily.

Mathematical Talk

What is different between dividing by 1 digit and 2 digits?
If the number does not divide into the ones, what do we do?

Do we need to round our remainders up or down? Why does the context affect whether we round up or down?

Varied Fluency

1 Solve the divisions using short division.

$5\overline{)725}$ $3\overline{)1938}$ $12\overline{)6036}$ $3{,}612 \div 14 =$

List the multiples of the number to help you calculate.

2 A limousine company allows 14 people per limousine.
How many limousines need to be hired for 230 people?

3 Year 6 have 2,356 pencil crayons for the year.
They put them in bundles with 12 in each bundle.
How many complete bundles can be made?

Short Division

Reasoning and Problem Solving

Find the missing digits

$$\begin{array}{r} 041\square r3 \\ 4\overline{)1\square59} \end{array}$$

$$\begin{array}{r} 0413r3 \\ 4\overline{)1659} \end{array}$$

Here are two calculation cards

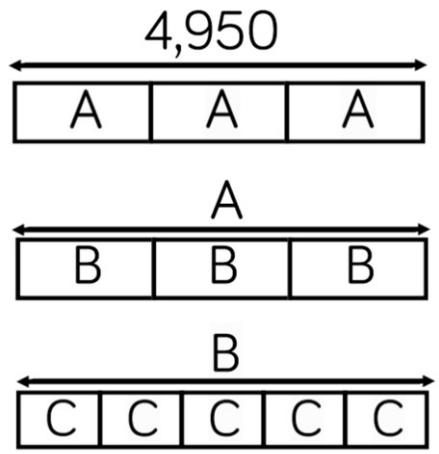
$A = 396 \div 11$

$B = 832 \div 13$

Find the difference between A and B

$396 \div 11 = 36$
$832 \div 13 = 64$
$64 - 36 = 28$

Work out the value of C
(The bar models are not drawn to scale)



$4{,}950 \div 3 = 1{,}650$

$1{,}650 \div 3 = 550$

$550 \div 5 = 110$

Division using Factors

Notes and Guidance

Children need to use their number sense, specifically their knowledge of factors to be able to see relationships between the divisor and dividend. Beginning with multiples of 10 and moving on will allow the children to see the relationship before progressing forward.

Mathematical Talk

What is a factor?
How does using factor pairs help us to answer division questions?
Do you notice any patterns?
Does using factor pairs always work?
Is there more than one way to solve a calculation using factor pairs?
What methods can be used to check your working out?

Varied Fluency

1 $780 \div 20 = 39$ is the same as
$780 \div 10 = 78$ then $78 \div 2 = 39$

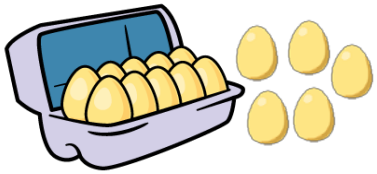
What do you notice?

Use the same method to solve $480 \div 60$

2 Use factors to help you to answer

$4{,}320 \div 15$

3 Eggs are put into boxes holding a dozen.
A farmer wants to put 648 eggs into boxes.
How many boxes will he have filled?



Division using Factors

Reasoning and Problem Solving

Divide 1,248 by

- 48
- 24
- 12

What did you do each time?
Explain your strategy.

1,248 ÷ 48 = 26
1,248 ÷ 24 = 52
1,248 ÷ 12 = 104
I used factor pairs to complete the first question e.g. I divided 1,248 by 12 then divided the answer by 4
Because 24 is half of 48, I doubled 26 to get 52
I repeated this with 12 to get 104

Ivan

To work out 4,320 ÷ 15 I will first divide 4,320 by 5 then divide the answer by 10

Is Ivan correct?
Explain why.

Ivan is incorrect. He has partitioned 15 when he should have used factor pairs e.g. 5 and 3
The answer is 288

Class 6 are solving

7,848 ÷ 24

The children decide which factor pairs to use between:

- 2 and 12
- 4 and 6
- 10 and 14

Which will not give them the correct answer? Why?

10 and 14 will not give them the correct answer because 10 and 14 are not factors of 24

Long Division (1)

Notes and Guidance

Children are introduced to long division as a different method of dividing by a 2-digit number. They divide 3-digit numbers by a 2-digit number without remainders moving from a more expanded method with multiples shown to the more formal long division method.

Mathematical Talk

How can we use our multiples to help us divide by a 2-digit number?

Why are we subtracting the totals from the beginning number (seeing division as repeated subtraction)?

In long division, what does the arrow represent? (The movement of the next digit coming down to be divided)

Varied Fluency

1

```
        3  6
    ┌──────
1 2 │ 4  3  2
  − 3  6  0      (×30)
    ──────
        7  2
  −     7  2      (×6)
    ──────
            0
```

Multiples to help

$12 \times 1 = 12$

$12 \times 2 = 24$

$12 \times 5 = 60$

$12 \times 10 = 120$

2

Solve the following divisions using Sam's method. Write out your multiples that may help you.

$765 \div 17 =$ $450 \div 15 =$ $702 \div 18 =$

3

```
        0  3  6
    ┌──────
1 2 │ 4  3  2
  − 3  6   ↓
    ──────
        7  2
  −     7  2
    ──────
            0
```

Use the long division method to solve the following calculations. One has been done for you as an example.

$836 \div 11 =$
$798 \div 14 =$
$608 \div 19 =$

Long Division (1)

Reasoning and Problem Solving

Which calculation could be the odd one out below?

- 512 ÷ 16 =
- 672 ÷ 21 =
- 928 ÷ 29 =
- 792 ÷ 24 =

Explain why.

512 ÷ 16 = 32
672 ÷ 21 = 32
928 ÷ 29 = 32
792 ÷ 24 = 33

Possible answers:
928 ÷ 29 is the odd one out because it is the only 3-digit number without a 2 in the ones column.

792 ÷ 24 is the odd one out because it is does not have the answer 32

Explain the mistake

746 ÷ 16 =

$$
\begin{array}{r}
41 \\
16\overline{)746} \\
-\,64 \quad (\times 4) \\
\hline
106 \\
-\,106 \quad (\times 10) \\
\hline
0
\end{array}
$$

Instead of writing 10 lots of 16 as 160 they have written 10 lots of 16 as 106
This is therefore the mistake in the calculation.

Long Division (2)

Notes and Guidance

Building on using long division with 3 digit numbers, children divide four digit numbers by 2 digits using the long division method.

They use their knowledge of multiples and multiplying and dividing by 10 and 100 to calculate more efficiently.

Mathematical Talk

How can we use our multiples to help us divide by a 2-digit number?

Why are we subtracting the totals from the beginning number (seeing division as repeated subtraction)?

In long division, what does the arrow represent?
(The movement of the next digit coming down to be divided)

Varied Fluency

1

```
        0  4  8  9
     ┌──────────
15   │ 7  3  3  5
   − 6  0  0  0        (× 400)
     ──────────
        1  3  3  5
   −  1  2  0  0        (× 80)
     ──────────
           1  3  5
   −       1  3  5      (× 9)
     ──────────
                 0
```

Here is a division method. Solve the divisions using this method.

2,208 ÷ 16 =

1,755 ÷ 45 =

_____ = 1,536 ÷ 16

2

There are 2,028 footballers in tournament. Each team has 11 players and 2 substitutes. How many teams are in the tournament?

Long Division (2)

Reasoning and Problem Solving

Which question is easier and which is harder?

- 1,950 ÷ 13 =
- 1,950 ÷ 15 =

Explain why.

1,950 ÷ 13 is harder because 13 is a prime number and therefore cannot be split into factors and divided in smaller parts.

6,823 ÷ 19 = 359 r2

8,259 ÷ ★ = 359 r2

★ is a prime number.

Find the value of ★

★ = 23

Long Division (3)

Notes and Guidance

Children now divide using long division where their answers have remainders. After dividing, they check that their remainder is smaller than their divisor.

Children start to understand when rounding is appropriate to use for interpreting the remainder and when the context means that this is not applicable.

Mathematical Talk

How can we use our multiples to help us divide?

What happens if we cannot divide our ones exactly by our divisor? How do we show what we have left over?

Why are we subtracting the totals from the starting amount (seeing division as repeated subtraction)?

Does the remainder need to be rounded up or down?

Varied Fluency

1 Elijah uses this method to calculate 372 divided by 15. He has used his knowledge of multiples to help.

```
      2  4 r 1  2
   ┌──────────
15 │  3  7  2
   − 3  0  0      (× 20)
   ──────────
      7  2
   −    6  0      (× 4)
   ──────────
      1  2
```

$1 \times 15 = 15$
$2 \times 15 = 30$
$3 \times 15 = 45$
$4 \times 15 = 60$
$5 \times 15 = 75$
$10 \times 15 = 150$

Solve the following calculations using Elijah's method. Show the multiples that you need to use to help you.

$271 \div 17 =$ $623 \div 21 =$ $842 \div 32 =$

2 A school needs to buy 380 biscuits to pass around at parents' evening. They come in packets of 12. How many packets with the school need to buy?

Long Division (3)

Reasoning and Problem Solving

Here are two calculation cards

A = 396 ÷ 11

B = 832 ÷ 11

Sana

I know the answers will both be whole numbers because 396 and 832 have 11 as a factor.

Eve

I know only one calculation will have a whole number because I did written calculation.

Which child is correct?

Eve is correct because 832 ÷ 11 gives an answer with a remainder.

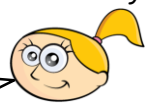
396 ÷ 11 = 36
832 ÷ 11 = 75r7

420 children and 32 adults need transport for a school trip.
A coach holds 55 people.

Beth

We need 7 coaches.

Kelsey



I think we need 8 coaches.

Jen

No, we need 9 coaches.

Who is correct?
Explain why.

Jen is correct because there are 452 people altogether.
452 ÷ 55 = 8r12

The 12 remaining people still need transport so 9 coaches are needed.

Long Division (4)

Notes and Guidance

Children now divide four-digit numbers using long division where their answers have remainders. After dividing, they check that their remainder is smaller than their divisor.

Children start to understand when rounding is appropriate to use for interpreting the remainder and when the context means that this is not applicable.

Mathematical Talk

How can we use our multiples to help us divide?

What happens if we cannot divide our ones exactly by our divisor?

How do we show what we have left over?

Why are we subtracting the totals from the starting amount (seeing division as repeated subtraction)?

Does the remainder need to be rounded up or down?

Varied Fluency

1 Simon used this method to calculate 1426 divided by 13. He wrote down his multiples key facts to help him work out the answer.

```
          1  0  9  r  9
      ┌──────────────
13    │  1  4  2  6
    −    1  3  0  0      (×100)
      ──────────────
          0  1  2  6
    −       1  1  7      (× 9)
      ──────────────
          0  0  9
```

Using Simon's method answer the following:

2,637 ÷ 16 =

4,231 ÷ 22 =

4,203 ÷ 18 =

2 There are 7,849 people going to a concert. Each coach holds 64 people. How many coaches are needed to transport all the people?

Long Division (4)

Reasoning and Problem Solving

Class 6 are completing this calculation

$$3{,}636 \div 12$$

Violet

I know there will be a remainder before I start.

Is she correct?

Explain how you know.

Violet is incorrect because the answer is 303

Violet could have partitioned the number into 3,600 and 36 to see that it is divisible by 12

Using the number 4,236, how many numbers up to 20 does it divide by without a remainder?

Is there pattern?

1, 2, 3, 4, 6, 12

They are all factors of 12

Common Factors

Notes and Guidance

Children find the common factors of two numbers.
Some children may still need to use arrays and other representations at this stage but mental methods and knowledge of multiples should be encouraged.
They can show their results using Venn diagrams and tables.

Mathematical Talk

How do you know you have found all the factors of a given number?
Have you used a system?
Can you explain your system to a partner?
How does a Venn diagram help to find common factors?
Where are the common factors?

Varied Fluency

1 What are the common factors of these pairs of numbers?

24 and 36
20 and 30
28 and 45

2 Which number is the odd one out?

12, 30, 54, 42, 32, 48

Can you explain why?

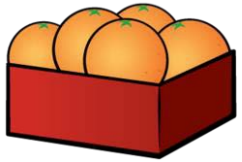
3 Two numbers have common factors of 4 and 9

What could the numbers be?

Common Factors

Reasoning and Problem Solving

There are 49 apples and 56 pears.



They need to be put into baskets with an equal number in each basket.

Jamil

I think there will be baskets with 8 pieces of fruit in each

I think there will be baskets with 7 pieces of fruit in each

Noah

Who is correct?

Explain how you know.

There will be 7 pieces of fruit in each basket because 7 is a common factor of 49 and 56

Tom has 2 pieces of string.

One is 160cm long and the other is 200cm long.

He cuts them into pieces of equal length.

What are the possible lengths the string could be?

2, 5, 10 and 20 are common factors of 160 and 200

Tahil has 32 football cards that he is giving away to his friends.

He shares them equally.

How many friends could Tahil have?

1, 2, 4, 8 or 16 friends.

Common Multiples

Notes and Guidance

Building on knowledge of multiples, children find common multiples of numbers. They should continue to use a visual representation to support their thinking. They also use more abstract methods to calculate the multiples and use numbers outside of times table facts.

Mathematical Talk

Are the lowest common multiples of a pair of numbers always the product of them?
Can you think of any strategies to work out the lowest common multiples of different numbers?
When do numbers have common multiples that are lower than their product?

Varied Fluency

1. On a 100 square, shade the first 5 multiples of 7 and then the first 8 multiples of 5
What do you notice?
Choose 2 other times tables which you think will have more than 3 common multiples.

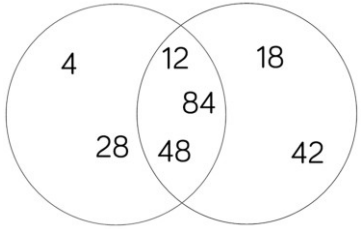
2. List 5 common multiples of 4 and 3

3. Jim and Nancy play football at the same local football pitches. Jim has plays once every 4 days and Nancy plays once every 6 days. In a fortnight, how many times will they play football on the same day?

Common Multiples

Reasoning and Problem Solving

Work out the headings for the Venn diagram.



Add in one more number to each section.

Can you think of a multiple of 6 and 8 that is a square number?

Headings:
Multiples of 4
Multiples of 6

144 is a multiple of 6 and 8

Nancy is double her sister's age.

They are both older than 20 and younger than 50

Their ages are both multiples of 7

Work out their ages.

Nancy: 42
Nancy's sister: 21

Train starts running from Leeds to York at 7am.
The last trains leaves at midnight.

Platform 1 has a train leaving from it every 12 minutes.
Platform 2 has one leaving from it every 5 minutes.

How many times in the day would there be a train leaving from both platforms at the same time?

Platform 1 and 2 will have a train leaving at the same time once every hour at o'clock.

Therefore there will be 18 times from 7am to midnight when a train will leave at both platform 1 and 2

Primes to 100

Notes and Guidance

Building on their learning in year 5, children should know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.

They should be able to use their understanding of prime numbers to work out whether or not numbers up to 100 are prime. Using primes, they break a number down into its prime factors.

Mathematical Talk

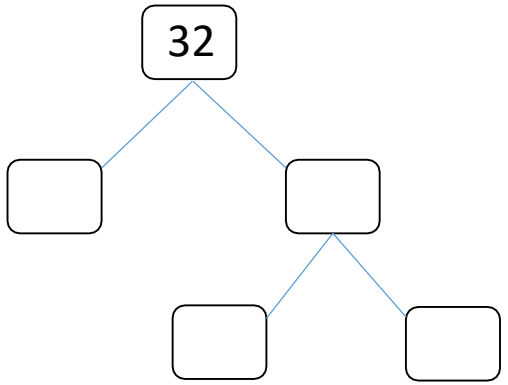
What is a prime number?
What is a composite number?
How many factors does a prime number have?
Are all prime numbers odd?
Why is 1 not a prime number?
Why is 2 a prime number?

Varied Fluency

1. List all the prime numbers between 10 and 30

2. The sum of two prime numbers is 36.
   Which numbers are they?

3. All numbers can be broken down into prime factors.
   A prime factor tree can help us find them.
   Complete the prime factor tree for 32



Primes to 100

Reasoning and Problem Solving

Use the clues to work out the number:

- It is greater than 10
- It is an odd number
- It is not a prime number
- It is less than 25
- It is a factor of 60

15

Shade in the multiples of 6 on a 100 square grid.

What do you notice about the numbers either side of every multiple of 6?

Kelsey

I noticed there is always a prime number next to a multiple of 6

Is Kelsey correct?
Explore this.

Possible answers: Both numbers are always odd.
Both numbers are not multiples of 3

Yes, Kelsey is correct because one of the numbers either side of a multiple of 6 is always prime.

Square & Cube Numbers

Notes and Guidance

Children have identified squared and cubed numbers previously and now need to explore the relationship between them and solve problems involving these numbers.
They need to experience sorting the numbers into different diagrams and look for patterns and relationships. they need to explore general statements.
This step is a good opportunity to practise efficient mental methods of calculation.

Mathematical Talk

What do you notice about the sequence of square numbers?

What do you notice about the sequence of cube numbers?

Explore the pattern of difference between the numbers.

Varied Fluency

1 Use symbols ≤ , ≥ or = to make these statements correct

3 cubed ☐ 6 squared

8 squared ☐ 4 cubed

11 squared ☐ 5 cubed

2 This table shows squared and cubed numbers. Complete the table. Explain the relationships you can see between the numbers.

	3 x 3		3^3		27
		25	5^3		
6^2				6 x 6 x 6	
	4 x 4		4^3		
					8
9^2					

3 ☐ + 35 = 99

210 – ☐ = 41

Which square numbers are missing from the calculations above?

Square & Cube Numbers

Reasoning and Problem Solving

Place 5 odd and 5 even numbers in the diagram below.

	Not cubed	Cubed
Over 100		
100 or less		

Put at least one number in each section.

Possible cube numbers to use: 8, 27, 64, 125, 216, 343, 512, 729, 1,000

Shade in all the square numbers on a 100 square grid.

Now shade in multiples of 4 on a 100 square grid.

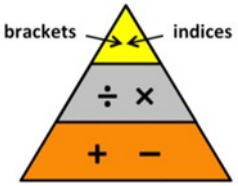
What do you notice?

Square numbers are always either a multiple of 4 or one more than a multiple of 4

Order of Operations

Notes and Guidance

Children will look at different operations within a calculation and consider how the order of operations affects the answer. The following image is useful when referring to the order of operations.



Mathematical Talk

Does it make a difference if you change the order in a mixed operations calculation?

What would happen if we did not use the brackets?

Would the answer be correct?

Why?

Varied Fluency

1 Sarah had 7 bags with 5 sweets in each. She added one more to each bag. Circle the calculation below that shows the correct working out.

$7\,(5+1)=42$
$7\times5+1=36$
$7\times5+1=42$

2 Daniel completed the following calculation and got the answer 168

$2(30\div5)+14=168$

Can you explain what he did and where he made the mistake?

3 Add brackets and the missing numbers to complete

$3+\square\times5=$
$25-6\times\square=$

Order of Operations

Reasoning and Problem Solving

Play Countdown.

Big numbers: 25, 50, 75, 100
Small numbers: 1 – 10

Without looking at the number cards, children choose 6 cards from across the big and small number cards.

Reveal a target number.

Children aim to make the target number.

Possible example:

Cards chosen: 75, 25, 2, 5, 6, 10

Target number: 458

Calculation:
$10 - 2 + (75 \times 6)$

Write different number sentences using the digits 3, 4, 5 and 8 before the equals sign that use:

- One operation
- Two operations, no brackets
- Two operations with brackets

Possible answers:

$58 - 34 =$
$58 + 3 \times 4 =$
$5(8 - 3) + 4 =$

Mental Calculations

Notes and Guidance

We have included this small step separately to ensure that teachers give emphasis to this important skill. Discussions around efficient mental calculations and sensible estimations need to run through all steps.

Sometimes children are too quick to move to computational methods, when changing the order leads to quick mental methods and solutions.

Mathematical Talk

Is there an easy and quick way to do this?

Can you use known facts to answer the problem?

Can you use rounding?

Does the solution need an exact answer?

How does knowing the approximate answer help with the calculation?

Varied Fluency

1 How could you change the order of these calculations to be able to perform them mentally?

50 x 16 x 2 =
30 x 12 x 2 =
25 x 17 x 4 =

2 Jamie buys a t shirt for £9.99, socks for £1.49 and a belt for £8.99
He was charged £23.47
How could he quickly check if he was overcharged?

3 What do you estimate that B represents when:
A = 0 and C = 1,000
A = 30 and C =150
A = -7 and C = 17
A = 0 and C = 5,000
A = 1,000 and C = 100,000

Mental Calculations

Reasoning and Problem Solving

Class 6 are solving this calculation:

3,912 + 3,888 =

Claire

To solve this I will double 3,900

Explain why Claire has done this.

Claire has noticed that 3,912 is 12 more than 3,900 and 3,888 is 12 less than 3,900

Class 6 are solving this calculation:

2,000 - 1,287 =

Fatima

I used the column method and exchanged in the tens, hundreds and thousands columns

I used my number bonds from 87 to 100 and then 1,300 to 2,000

Adam

Stefan

I subtracted 1 from 2,000 and 1 from 1,287 then I did a column subtraction

Which method is most efficient?

Children share their ideas. Discuss how Fatima's method is inefficient for this question because the many exchanges make it difficult.

Reason from Known Facts

Notes and Guidance

Pupils should be able to use their understanding of known facts from one calculation to work out the answer of another similar calculation without starting afresh.

They should use reasoning and apply their knowledge of commutativity and inverse.

Mathematical Talk

What is the inverse?

When do you use the inverse?

How can we use multiplication/division facts to help us answer similar questions?

Varied Fluency

1

$70 \div \_\_ = 3.5$
$70 \div \_\_ = 7$
$\_\_ \div 2 = 35$
$\_\_ \times 3.5 = 7$
$3.5 \times 20 = \_\_$
$70 \div \_\_ = 3.5$

Make a similar set of calculations using $90 \div 2 = 45$

2

$5138 \div 14 = 367$
Use this to work out 15×367

3

$14 \times 8 = 112$
Use this to work out:

1.4×8
140×8

Reason from Known Facts

Reasoning and Problem Solving

Use this fact

$$3{,}565 + 2{,}250 = 5{,}815$$

To work out which statements are true or false.

a) 4,565 + 1,250 = 5,815
b) 5,815 – 2,250 = 3,565
c) 4,815 – 2,565 = 2,250
d) 4,065 + 2,750 = 6,315

Write three more statements.

a) True – 1,000 added to 3,565 and 1,000 subtracted from 1,250 so cancels out

b) True – inverse

c) True – subtracted 1,000 from both numbers so difference is still 2,250

d) False - 500 have been added to both numbers so 5,815 should have increased by 1,000

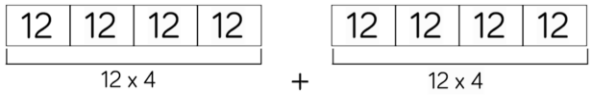
$$12 \times 8$$

Which of the following will give the same answer as above?

a) $3 \times 4 \times 8$

b) $12 \times 4 \times 2$

c) $2 \times 10 \times 8$

d) 

A, B and D will give the same answer as 12×8