

Fluency

Look at the value of the numbers

$$3210 + 2564 = 9836 - \underline{\quad}$$

Calculate $36 \cdot 2 + 19 \cdot 8$

Two numbers have a difference of 2.3. They are both less than 10. What could the numbers be?

x and y represent whole numbers. Their sum is 1000.

x is 250 more than y .

What are the values of x and y ?

Estimate the answer to $4243 + 1734$ by rounding the numbers to: the nearest 1000, the nearest 100, the nearest 50, the nearest 10

Compact written methods for addition and subtraction

$$\begin{array}{r} 657,982 \\ + 54,976 \\ \hline 712,958 \\ \small 1 \quad 1 \quad 1 \quad 1 \end{array}$$

$$\begin{array}{r} 72.83 \\ + 17.365 \\ \hline 90.195 \\ \small 1 \quad 1 \end{array}$$

Use of larger numbers and calculating with decimals, including those with different numbers of decimal places

$$\begin{array}{r} 4 \quad 8 \quad 6 \\ 5 \overset{1}{1} \quad 9, \overset{12}{12} \quad 7 \overset{13}{13} \\ - \quad 34,456 \\ \hline 484,817 \end{array}$$

$$\begin{array}{r} 7 \quad 15 \\ 1 \cancel{3} . 86 \overset{10}{0} \\ - \quad 9.481 \\ \hline 4.379 \end{array}$$

Which is the most **efficient** way to calculate?

Mentally using known facts?

Jottings to keep track?
A written method?

Year 6 Addition and Subtraction

Problem Solving

Which skills and knowledge do you need to tackle the problem?

Understand the operations of addition and subtraction.

Continue to solve missing number problems

$$0.63 + \square = 0.85$$

$$\square = 0.5 - 0.33$$

$$\square + \square = 0.71$$

$$\square - \square = 0.11$$

$$0.89 + 0.3 = 0.6 + \square$$

$$\square + \square > 0.74 + 0.07$$

$$0.63 - \square = 0.32$$

$$0.75 < \square - 0.06$$

Explore the order of operations using brackets (solve the bracket part first)
compare $14 - (3 + 5)$ with $(14 - 3) + 5$

Use algebraic methods to solve missing number problems

$$2n + 8 = 12 \quad \text{using the inverse } 2n = 4$$

$$\text{So, } n = 2$$

Know complements to the next whole number

$$4.83 + \square = 5$$

$$7.125 + \square = 8$$

Calculate by rounding and adjusting

$$7.65 - 0.99 \quad (\text{subtract 1 and add } 0.01)$$

$$15.4 - 3.09 \quad (\text{subtract } 3.1 \text{ and add } 0.01)$$

Estimate

$$73.82 + 17.382 \text{ is approximately } 74 + 17$$

Continue to check using inverse calculations

Investigate

Three pandas are eating bamboo sticks. There are 51 sticks altogether. They all eat an odd number of sticks. How many bamboo sticks did they each eat? How many different ways can you do it?

Reasoning and Problem Solving

Josh is trying to run 10 kilometres in one week.

On Day 1 he runs **1.6 km**, Day 2 he runs **850m** and Day 3 he runs **2.12 km**.

How much further does he have to run? *How do you calculate with different units?*

A shop sells magazines and comics. Freya buys a magazine and a comic. She pays **£2.50**.

Evie buys a magazine and two comics. She pays **£3.90**.

How much does a comic cost?

How much does a magazine cost?

Abdul says "If I add any two 4-digit numbers together it will make a 5 digit number." Do you agree? Explain why.

Can you find examples that prove and disprove the statement?

Katie subtracted $\frac{8}{10}$ away from a fraction and her answer was $\frac{3}{5}$. What was the original fraction?

Use the correct vocabulary

partition, recombine, calculate, plus, add, total, increase, sum, altogether, how much /many more? decrease, minus, subtract, take away, less, fewer, difference, partition, exchange, adjust

How can you represent this problem?

Peter paid **£21** for 5 presents.

For A and B he paid a total of **£6**.

For B and C he paid a total of **£10**.

For C and D he paid a total of **£7**.

For D and E he paid a total of **£9**.

How much did Peter pay for each present?