

Modern Primary Mathematics (Second Edition)

Mixed Operations of Addition and Subtraction

Focus 1 Mixed Operations of Addition and Subtraction

$$\begin{aligned} 1 \quad & 168 + 290 - 265 \\ & = 458 - 265 \\ & = 193 \end{aligned}$$

$$\begin{array}{r} 168 \\ + 290 \\ \hline 458 \\ - 265 \\ \hline 193 \end{array}$$

Calculate in the order from left to right.



Focus 1

Mixed Operations of Addition and Subtraction

$$\begin{aligned}
 & 2 \quad 125 + 375 - 64 \\
 & = \boxed{500} \ominus \boxed{64} \\
 & = \boxed{436}
 \end{aligned}$$

$$\begin{array}{r}
 125 \\
 \oplus \boxed{375} \\
 \hline
 \boxed{500} \\
 \ominus \boxed{64} \\
 \hline
 \boxed{436}
 \end{array}$$

Remember to line up the digits.

Focus 1 Mixed Operations of Addition and Subtraction

Consolidation

$$\begin{aligned} \textcircled{1} \quad & 72 + 16 - 43 \\ & = \boxed{45} \end{aligned}$$

$$\begin{array}{r} 72 \\ + 16 \\ \hline 88 \\ - 43 \\ \hline 45 \end{array}$$

Focus 1 Mixed Operations of Addition and Subtraction

Consolidation

$$\begin{aligned} \textcircled{2} \quad & 238 - 21 + 71 \\ & = \boxed{288} \end{aligned}$$

$$\begin{array}{r} 238 \\ - 21 \\ \hline 217 \\ + 71 \\ \hline 288 \end{array}$$

Focus 1

Mixed Operations of Addition
and Subtraction

Consolidation

$$\textcircled{3} \quad 96 + 108 - 75 = \boxed{129}$$

$$\textcircled{4} \quad 310 - 128 + 219 = \boxed{401}$$

Focus 1 Mixed Operations of Addition and Subtraction

- 2 Lawrence has \$150. Tom has \$115. Together they buy a basketball which costs \$200. How much money do they still have?

First, find how much money Lawrence and Tom have altogether. Then, find the amount left after they buy the basketball.



Focus 1 Mixed Operations of Addition and Subtraction

- 2 Lawrence has \$150. Tom has \$115. Together they buy a basketball which costs \$200. How much money do they still have?

I show the above in one expression.



$$\begin{array}{r} \text{Money they have} \\ \text{altogether} \\ \hline 150 + 115 \\ \hline = 65 \\ \text{Money spent} \\ \text{on basketball} \\ \hline - 200 \\ \hline \end{array}$$

They still have \$65.

Focus 2 Solving Problems

- 3 In a gift shop, there are 542 key rings. There are 178 more mugs than key rings, and 356 fewer phone cases than mugs. How many phone cases are there in the gift shop?

Number
of mugs

There are 356 fewer
phone cases than mugs

$$542 + 178 - 356$$

$$= 720 - 356$$

$$= 364$$

There are 364 phone cases in the gift shop.

$$\begin{array}{r} 542 \\ + 178 \\ \hline 720 \\ - 356 \\ \hline 364 \end{array}$$

Focus 2 Solving Problems

Consolidation

- ② A fashion shop has 247 shirts for men and 195 shirts for women. There are 279 shirts are on sale. How many shirts are not on sale?

$$247 + 195 - 279$$

$$= 442 - 279$$

$$= 163$$

163 shirts are not on sale.

$$\begin{array}{r}
 247 \\
 + 195 \\
 \hline
 442 \\
 - 279 \\
 \hline
 163
 \end{array}$$

Focus 2 Solving Problems

Consolidation

- 3 A pair of football boots costs \$458. A pair of basketball shoes is \$85 cheaper than football boots. A pair of running shoes is \$129 more expensive than basketball shoes. How much does a pair of running shoes cost?

$$458 - 85 + 129$$

$$= 373 + 129$$

$$= 502$$

A pair of running shoes costs \$502.

$$\begin{array}{r}
 458 \\
 - 85 \\
 \hline
 373 \\
 + 129 \\
 \hline
 502
 \end{array}$$



Exercise 7

Solve the following problems and show your working.

- 1 There were 752 people on the train at first. When the train arrived at the station, 240 people got off, and another 169 people got on. How many people are there on the train now?

$$752 - 240 + 169$$

$$= 512 + 169$$

$$= 681$$

There are 681 people on the train now.

$$\begin{array}{r}
 752 \\
 - 240 \\
 \hline
 512 \\
 + 169 \\
 \hline
 681
 \end{array}$$


Exercise 7

Solve the following problems and show your working.

- 2 Terry is 172 cm tall, and is 14 cm shorter than Stanley. Alan is 48 cm shorter than Stanley. How tall is Alan in cm?

$$172 + 14 - 48$$

$$= 186 - 48$$

$$= 138$$

Alan is 138 cm tall.

$$\begin{array}{r}
 172 \\
 + 14 \\
 \hline
 186 \\
 - 48 \\
 \hline
 138
 \end{array}$$

Exchanging positions

$$\begin{aligned} 2 \quad a \quad & 543 + 126 - 43 \\ & = 543 - 43 + 126 \\ & = 500 + 126 \\ & = 626 \end{aligned}$$

Sometimes it is more convenient for calculation if we change the order of calculation.



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Exchanging positions

2 b $248 + 156 - 48$

$$= 248 - 48 + 156$$

$$= 200 + 156$$

$$= 356$$

$$248 - 48 = ?$$



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Exchanging positions

3 a $20 - 35 + 48 = ?$



We cannot subtract 35 from 20.
How should we calculate this?

$$\begin{aligned}
 & 20 - 35 + 48 \\
 = & 20 + 48 - 35 \\
 = & 68 - 35 \\
 = & 33
 \end{aligned}$$

When a number is too small for subtraction, we may change the order of calculation and do addition first.



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Exchanging positions

$$\begin{aligned}
 & \text{3 b } 54 - 96 + 143 \\
 & = \boxed{54} \oplus \boxed{143} \ominus \boxed{96} \\
 & = \boxed{197} \ominus \boxed{96} \\
 & = \boxed{101}
 \end{aligned}$$

Remember to move the number together with the sign before it.



Mixed Operations of Addition and Subtraction

Consolidation

$$① \quad 196 + 467 - 96 = \boxed{567}$$

$$② \quad 28 - 128 + 300 = \boxed{200}$$