Answers - Addition and subtraction with 3-digit numbers

Year: Year 3

Answer to Question 1

a. 346 + 30 = **376**.
b. 512 + 200 = **712**.
c. 278 + 5 = **283**.
d. 497 + 40 = **537**.
e. 605 + 95 = **700**.

Answer to Question 2

a. 578 − 40 = **538**.
b. 842 − 300 = **542**.
c. 463 − 7 = **456**.
d. 700 − 50 = **650**.
e. 305 − 9 = **296**.

Answer to Question 3

a. Ones: 3 + 5 = 8. Tens: 4 + 2 = 6. Hundreds: 2 + 1 = 3. Answer: **368**.
b. Ones: 7 + 4 = 11 (write 1, exchange 1 ten). Tens: 6 + 1 + 1 = 8. Hundreds: 3 + 2 = 5. Answer: **581**.
c. Ones: 8 + 6 = 14 (write 4, exchange 1 ten). Tens: 5 + 7 + 1 = 13 (write 3, exchange 1 hundred). Hundreds: 4 + 2 + 1 = 7. Answer: **734**.
d. Ones: 9 + 7 = 16 (write 6, exchange 1 ten). Tens: 8 + 5 + 1 = 14 (write 4, exchange 1 hundred). Hundreds: 3 + 4 + 1 = 8. Answer: **846**.

Answer to Question 4

a. Ones: 8 − 5 = 3. Tens: 6 − 4 = 2. Hundreds: 7 − 3 = 4. Answer: **423**. Check: 423 + 345 = 768.
b. Ones: exchange 1 ten for 10 ones: 13 − 8 = 5. Tens: exchange 1 hundred for 10 tens: 11 − 6 = 5. Hundreds: 4 − 1 = 3. Answer: **355**. Check: 355 + 168 = 523.
c. There are no tens, so exchange 1 hundred for 10 tens. Ones: exchange 1 ten for 10 ones: 12 − 7 = 5. Tens: 9 − 5 = 4. Hundreds: 7 − 4 = 3. Answer: **345**. Check: 345 + 457 = 802.
d. Ones: exchange 1 ten for 10 ones: 10 − 3 = 7. Tens: exchange 1 hundred for 10

tens: 13 − 8 = 5. Hundreds: 5 − 2 = 3. Answer: **357**. Check: 357 + 283 = 640.

Answer to Question 5

a. Estimate: 300 + 400 = 700. Exact: 298 + 405 = **703**. The exact answer is close to the estimate.
b. Estimate: 600 - 400 = 200. Exact: 612 - 389 = **223**. The exact answer is close to the estimate.
c. Estimate: 200 + 200 = 400. Exact: 187 + 214 = **401**. The exact answer is close to the estimate.
d. Estimate: 800 - 400 = 400. Exact: 796 - 408 = **388**. The exact answer is close to the estimate.

Answer to Question 6

a. 462 − 135 = **327**. Check: 327 + 135 = 462.
b. 651 − 280 = **371**. Check: 280 + 371 = 651.
c. 275 + 148 = **423**. Check: 423 − 148 = 275.
d. 704 − 329 = **375**. Check: 704 − 375 = 329.

Answer to Question 7

a. 248 + 319 = **567**. Ones 8 + 9 = 17, tens 4 + 1 + 1 = 6, hundreds 2 + 3 = 5.
b. 567 + 175 = **742**.
c. 800 − 742 = **58** eggs.
d. 319 − 175 = **144**.

Answer to Question 8

a. Add the two coaches: 56 + 49. Adding 49 is adding 50 and taking 1 away: 56 + 50 = 106, then 106 − 1 = **105** children.
b. Add the teachers and helpers: 105 + 38. 105 + 30 = 135, then 135 + 8 = **143** people.
c. One free ticket covers a group of 100. 143 − 100 = **43** people are left over, not enough for a second free ticket.
d. Coach B has 60 seats and 49 children. Count on from 49 to 60: 1 to reach 50, then 10 more. **11** seats are empty.

Answer to Question 9

a. 215 − 128 = **£87**.

b. 87 − 50 = **£37**.
c. 37 − 25 = **£12**.
d. 128 + 50 + 25 = **£203**. Check: 215 − 203 = 12.

Answer to Question 10

a. Add the first two matches in columns: 324 + 289. Ones: 4 + 9 = 13, write 3 carry 1. Tens: 2 + 8 + 1 = 11, write 1 carry 1. Hundreds: 3 + 2 + 1 = 6. Total **613** fans.
b. Add the third match: 613 + 356. Ones 3 + 6 = 9, tens 1 + 5 = 6, hundreds 6 + 3 = 9. Total **969** fans.
c. Find the difference: 356 − 289. Count on from 289: 11 to reach 300, then 56 to reach 356. 11 + 56 = **67** more fans.
d. Count on from 324 to 1000: 76 to reach 400, then 600 to reach 1000. 76 + 600 = **676** empty seats.

Answer to Question 11

a. Add 465 + 238 in columns. Ones: 5 + 8 = 13, write 3 carry 1. Tens: 6 + 3 + 1 = 10, write 0 carry 1. Hundreds: 4 + 2 + 1 = 7. The library has **703** books.
b. Take away 56: 703 − 56. 703 − 3 = 700, 700 − 53 = 647. **647** books remain.
c. 29 books come back, so add: 647 + 30 = 677, then take 1 away: **676** books on the shelves.
d. Only the non-fiction books change: 238 + 100 = **338**. Adding 100 makes only the hundreds digit go up by 1.

Answer to Question 12

a. Add the first two parts: 285 + 340. 285 + 300 = 585, then 585 + 40 = **625 m**.
b. Add the third part: 625 + 175. 625 + 100 = 725, then 725 + 75 = **800 m**.
c. The signpost says 1000 m. Count on from 800 to 1000: **200 m** further.
d. Find the difference between 340 and 175: count on 25 to reach 200, then 140 to reach 340. 25 + 140 = **165 m** longer.

Answer to Question 13

a. 235 − 187 = **48**. Anya has 48 more.
b. 187 + 235 = **422**.
c. 422 − 90 = **332**.
d. Tom: 187 + 24 = **211**. Anya: 235 − 24 = **211**. They now have the same number!

Answer to Question 14

a. 124 + 207 = **331**.
b. 331 + 96 = **427**.
c. 600 − 427 = **173**.
d. 100 + 200 + 100 = 400. 427 is close to 400.

Answer to Question 15

a. £236 + £187 = **£423**.
b. 423 + 215 = **£638**. Plant stall £215.
c. 900 − 638 = **£262**.
d. 638 + 150 = 788, which is less than 900. **No**. They still need £112.

Answer to Question 16

a. 248 + 176 + 120 = **544**.
b. 544 − 315 = **229**.
c. 500 − 315 = **185**.
d. 248 + 120 = 368. 248 + 176 = 424. 368 is less than 424, so **Zoe is right**.

Answer to Question 17

a. Ones: 6 + 8 = 14, so he must carry 1 ten, and tens 4 + 7 + 1 = 12, so he must carry 1 hundred. He forgot to carry. Correct: 346 + 278 = **624**. His answer is wrong.
b. 703 − 456 = 247. He took the smaller digit from the larger. The correct answer is **247**.
c. Ones 9 + 1 = 10, tens 1 + 8 + 1 = 10, hundreds 2 + 4 + 1 = 7. **Right**: 700.
d. 500 − 237: 237 + 263 = 500. **Right**.

Answer to Question 18

a. 28 + 31 + 29 = **88**.
b. 120 − 88 = **32**.
c. 32 − 11 = **21**.
d. 88 − 29 = **59**. Estimate: 90 − 30 = 60, close to 59.

Answer to Question 19

a. 126 + 258 = **384 km**.
b. 384 − 297 = **87 km**.
c. 384 + 384 = **768 km**.
d. 800 − 768 = **32 km**.

Answer to Question 20

a. Put the biggest digits in the hundreds places: 6 and 5. Then the next biggest in the tens: 4 and 3. Then the ones: 2 and 1. For example 631 and 542. **631 and 542**.
b. 631 + 542 = **1173**.
c. Put the smallest digits in the hundreds: 1 and 2, then 3 and 4 in the tens, then 5 and 6 in the ones: 135 + 246 = **381**.