

Y3/4 More addition and subtraction Unit 2 (34316)

Additional teacher instructions for practice sheets

These notes indicate which practice sheets are most appropriate for which groups.

Day 1 Y3 Adding 2-digit numbers Sheet 1

Working towards ARE / Working at ARE / Greater Depth

Working towards ARE complete Set A using place value cards.

Working at ARE complete every other question in Set A and all of Set B.

Greater Depth complete every other question in Set B and all of Set C.

Day 1 Y4 Adding 3-digit numbers using compact addition Sheet 2

Working towards ARE / Working at ARE

Day 1 Y4 Adding 3-digit numbers using compact addition Sheet 3

Greater Depth

Day 2 Y3 Adding 2-digit numbers Sheet 1

Working towards ARE / Working at ARE

Working towards ARE complete Set A using place value cards.

Working at ARE complete Set B and the Challenge.

Day 2 Y3 Adding 2-digit numbers Sheet 2

Greater Depth

Day 2 Y4 Addition word problems with three 3-digit numbers Sheet 3

Working towards ARE

Day 2 Y4 Addition word problems with three 3-digit numbers Sheet 4

Working at ARE / Greater Depth

Day 3 Y3 Adding 2-digit numbers Sheet 1

Working towards ARE / Working at ARE / Greater Depth

Working towards ARE use place value cards to support and aim to complete questions 1 to 8.

Working at ARE aim to complete questions 1 to 12.

Greater Depth start at question 5 and complete the sheet.

Day 3 Y4 Adding three numbers Sheet 2

Working towards ARE / Working at ARE

Working towards ARE complete Parts 1 and 2.

Working at ARE complete Parts 2 and 3.

Day 3 Y4 Adding four numbers Sheet 3

Working at ARE / Greater Depth

Working at ARE complete Parts 1 and 2.

Greater Depth complete Parts 2 and 3.

Adding 2-digit numbers

Sheet 1

Add each pair of numbers using partitioning.

Set A

$34 + 13 = \boxed{}$

$44 + 32 = \boxed{}$

$12 + 24 = \boxed{}$

$51 + 32 = \boxed{}$

$23 + 41 = \boxed{}$

$44 + 22 = \boxed{}$

$11 + 43 = \boxed{}$

$23 + 32 = \boxed{}$

Set B

$34 + 28 = \boxed{}$

$22 + 19 = \boxed{}$

$56 + 36 = \boxed{}$

$45 + 27 = \boxed{}$

$18 + 64 = \boxed{}$

$77 + 15 = \boxed{}$

$39 + 43 = \boxed{}$

$28 + 66 = \boxed{}$

Set C

$46 + 53 = \boxed{}$

$32 + 67 = \boxed{}$

$64 + 42 = \boxed{}$

$81 + 26 = \boxed{}$

$65 + 64 = \boxed{}$

$18 + 89 = \boxed{}$

$59 + 77 = \boxed{}$

$24 + 68 = \boxed{}$

Adding 3-digit numbers using compact addition

Sheet 2

A

$$\begin{array}{r} 243 \\ + 645 \\ \hline \end{array}$$

$$\begin{array}{r} 831 \\ + 154 \\ \hline \end{array}$$

$$\begin{array}{r} 755 \\ + 321 \\ \hline \end{array}$$

$$\begin{array}{r} 264 \\ + 535 \\ \hline \end{array}$$

$$\begin{array}{r} 426 \\ + 453 \\ \hline \end{array}$$

B

$$\begin{array}{r} 246 \\ + 645 \\ \hline \end{array}$$

$$\begin{array}{r} 838 \\ + 154 \\ \hline \end{array}$$

$$\begin{array}{r} 791 \\ + 325 \\ \hline \end{array}$$

$$\begin{array}{r} 243 \\ + 585 \\ \hline \end{array}$$

$$\begin{array}{r} 426 \\ + 456 \\ \hline \end{array}$$

C

$$\begin{array}{r} 268 \\ + 645 \\ \hline \end{array}$$

$$\begin{array}{r} 837 \\ + 174 \\ \hline \end{array}$$

$$\begin{array}{r} 755 \\ + 386 \\ \hline \end{array}$$

$$\begin{array}{r} 267 \\ + 555 \\ \hline \end{array}$$

$$\begin{array}{r} 466 \\ + 456 \\ \hline \end{array}$$

D

$$\begin{array}{r} 243 \\ 645 \\ + 111 \\ \hline \end{array}$$

$$\begin{array}{r} 631 \\ 154 \\ + 213 \\ \hline \end{array}$$

$$\begin{array}{r} 451 \\ 126 \\ + 321 \\ \hline \end{array}$$

$$\begin{array}{r} 244 \\ 729 \\ + 133 \\ \hline \end{array}$$

$$\begin{array}{r} 327 \\ 115 \\ + 453 \\ \hline \end{array}$$

Challenge

Can you find a pair of 3-digit numbers which add to give exactly 1000?
All six digits must be different!

Adding 3-digit numbers using compact addition

Sheet 3

- Write a 3-digit number obeying this rule:
 - The digits must go up in twos (e.g. 468 or 357).
- Write the number with the same digits in reverse order.
- Add the two numbers using column addition.
- Circle the answer.
- Repeat this four times.
- What do you notice about the pattern in the answers?
- Predict what happens if you add numbers which go up in threes (e.g. 147 and 741).
- Try three like this.
- How about if they go up in 4s....?

3 5 7
+ 7 5 3

Challenge

What happens with 4-digit numbers, e.g. $2468 + 8642 = ?$

Adding 2-digit numbers

Sheet 1

Set A

$36 + 25 = \boxed{}$

$42 + 19 = \boxed{}$

$27 + 46 = \boxed{}$

$44 + 38 = \boxed{}$

$19 + 64 = \boxed{}$

$57 + 25 = \boxed{}$

$49 + 33 = \boxed{}$

$68 + 23 = \boxed{}$

Set B

$56 + 25 = \boxed{}$

$82 + 47 = \boxed{}$

$44 + 62 = \boxed{}$

$91 + 36 = \boxed{}$

$55 + 54 = \boxed{}$

$72 + 43 = \boxed{}$

$66 + 73 = \boxed{}$

$88 + 31 = \boxed{}$

Challenge

Can you use the numbers in your set to create different calculations? Which combination of numbers will make the largest answer and which the smallest?

Adding 2-digit numbers

Sheet 2

$28 + 79 = \boxed{}$

$99 + 57 = \boxed{}$

$64 + 58 = \boxed{}$

$87 + 65 = \boxed{}$

$98 + 78 = \boxed{}$

$59 + 67 = \boxed{}$

$46 + 88 = \boxed{}$

$75 + 67 = \boxed{}$

Challenge

Use the numbers on this page to create different calculations.
Which pair of numbers will make the largest answer?
And which the smallest?
Which pair give an answer of 155?

Challenge

If your calculations were for money and your answers are in pence, what would they be in pounds and pence?

Addition word problems with three 3-digit numbers

Sheet 3

Choose two numbers.
Add them.

Do this four times, using different pairs of numbers.

243

315

482

537

303

Use written addition to solve these word problems:

- 1) Zoe pays £125 for her bike.
Amit pays £136 for his.
How much do they pay altogether?
- 2) Mo is 130 cm tall, Ryan is 140 cm tall and Ella is 125 cm tall.
How many centimetres tall are they altogether?
- 3) Sunil, Sonny and Sally have each got 125 Pokémon stickers.
How many do they have altogether?

Addition word problems with three 3-digit numbers

Sheet 4

Choose two numbers.

Add them.

Do this four times, using different pairs of numbers.

247

375

482

539

363

Use compact written addition to solve these word problems:

- 1) Mo is 130 cm tall, Ryan is 132 cm tall and Ella is 127 cm tall.
How many centimetres long would they be if they lay end to end on the floor?
- 2) Zoe's bike cost £134, Tom's cost £129 and Oti's cost £135.
How much are all three bikes?
- 3) Luke, Mia and Chen are playing a computer game.
Luke scores 342 points, Mia scores 451 points and Chen scores 124 points.
How many points do they score altogether?
- 4) Anna, Dev and Sam are playing pinball.
Anna scores 630 points, Dev scores 723 points and Sam scores 215 points.
How many points do they score altogether?
- 5) Farmer Fred has 223 sheep, 197 cows and 478 chickens.
How many animals does he have altogether?
- 6) Farmer Jess has 651 sheep, 574 cows and 842 chickens.
How many animals does she have altogether?

Challenge

Make up a word problem where you have to add 473 and 385.

Adding 2-digit numbers

Sheet 1

1. $36 + 23 =$

2. $54 + 24 =$

3. $67 + 21 =$

4. $65 + 25 =$

5. $36 + 47 + 54 =$

6. $42 + 28 + 38 =$

7. $53 + 27 + 41 =$

8. $52 + 62 + 38 =$

9. $42 + 37 + 48 =$

10. $55 + 32 + 25 =$

11. Ellie bought a skateboard for £45, a helmet for £24 and knee pads for £19.

How much did she spend altogether?

12. Daniel bought roller skates for £56, a helmet for £24 and arm pads for £21.

How much did he spend altogether?

13. $146 + 58 + 47 =$

14. $241 + 27 + 18 =$

15. $135 + 28 + 36 =$

16. $127 + 54 + 31 =$

Adding three numbers

Sheet 2

Part 1

Use expanded addition to solve these additions:

$12 + 13 + 22$

$20 + 16 + 24$

$32 + 14 + 27$

$27 + 21 + 34$

$36 + 33 + 24$

$55 + 44 + 32$

Part 2

Use compact addition to solve these additions:

$21 + 42 + 34$

$32 + 47 + 46$

$34 + 25 + 42$

$46 + 51 + 28$

$51 + 62 + 45$

$67 + 72 + 39$

$48 + 46 + 53$

$74 + 63 + 86$

Part 3

Choose three cards.

Add the numbers.

Do this six times.

You must do a different addition each time!

47

66

58

45

74

Challenge

I added three consecutive numbers with a total of 222.

What were the numbers?

Adding four numbers

Sheet 3

Part 1

Use expanded or compact addition to solve these additions:

$11 + 23 + 12 + 31$

$35 + 21 + 14 + 32$

$24 + 15 + 23 + 11$

$41 + 10 + 22 + 53$

$32 + 61 + 45 + 56$

$58 + 72 + 63 + 64$

Part 2

Use compact addition to solve these additions:

$62 + 75 + 84 + 53$

$76 + 71 + 27 + 82$

$83 + 81 + 94 + 37$

$95 + 12 + 60 + 76$

$84 + 72 + 85 + 96$

$98 + 89 + 78 + 97$

Part 3

A palindrome reads the same backwards as forwards, e.g. the words: mum, level or madam. Palindromic numbers do the same, e.g. 4114 or 55 or 727.

Add four 2-digit numbers to give each of these palindromic answers:

202

191

333

252

Challenge

What is the largest possible palindromic total you can find by adding four 2-digit numbers?

More addition and subtraction

Answers

Day 1 Y3 Adding 2-digit numbers Sheet 1

Set A

$34 + 13 = 47$

$44 + 32 = 76$

$12 + 24 = 36$

$51 + 32 = 83$

$23 + 41 = 64$

$44 + 22 = 66$

$11 + 43 = 54$

$23 + 32 = 55$

Set B

$34 + 28 = 62$

$22 + 19 = 41$

$56 + 36 = 92$

$45 + 27 = 72$

$18 + 64 = 82$

$77 + 15 = 92$

$39 + 43 = 82$

$28 + 66 = 94$

Set C

$46 + 53 = 99$

$32 + 67 = 99$

$64 + 42 = 106$

$81 + 26 = 107$

$65 + 64 = 129$

$18 + 89 = 107$

$59 + 77 = 136$

$24 + 68 = 92$

Day 1 Y4 Adding 3-digit numbers using compact addition Sheet 2

| A | B | C | D |
|--|---|--|---|
| $\begin{array}{r} 243 \\ + 645 \\ \hline 888 \end{array}$ | $\begin{array}{r} 246 \\ + 645 \\ 1 \\ \hline 891 \end{array}$ | $\begin{array}{r} 268 \\ + 645 \\ 11 \\ \hline 913 \end{array}$ | $\begin{array}{r} 243 \\ 645 \\ + 111 \\ \hline 999 \end{array}$ |
| $\begin{array}{r} 831 \\ + 154 \\ \hline 985 \end{array}$ | $\begin{array}{r} 838 \\ + 154 \\ 1 \\ \hline 992 \end{array}$ | $\begin{array}{r} 837 \\ + 174 \\ 111 \\ \hline 1011 \end{array}$ | $\begin{array}{r} 631 \\ 154 \\ + 213 \\ \hline 998 \end{array}$ |
| $\begin{array}{r} 755 \\ + 321 \\ 1 \\ \hline 1076 \end{array}$ | $\begin{array}{r} 791 \\ + 325 \\ 11 \\ \hline 1116 \end{array}$ | $\begin{array}{r} 755 \\ + 386 \\ 111 \\ \hline 1141 \end{array}$ | $\begin{array}{r} 451 \\ 126 \\ + 321 \\ \hline 898 \end{array}$ |
| $\begin{array}{r} 264 \\ + 535 \\ \hline 799 \end{array}$ | $\begin{array}{r} 243 \\ + 585 \\ 1 \\ \hline 828 \end{array}$ | $\begin{array}{r} 267 \\ + 555 \\ 11 \\ \hline 822 \end{array}$ | $\begin{array}{r} 244 \\ 729 \\ + 133 \\ 111 \\ \hline 1106 \end{array}$ |
| $\begin{array}{r} 426 \\ + 453 \\ \hline 879 \end{array}$ | $\begin{array}{r} 426 \\ + 456 \\ 1 \\ \hline 882 \end{array}$ | $\begin{array}{r} 466 \\ + 456 \\ 11 \\ \hline 922 \end{array}$ | $\begin{array}{r} 327 \\ 115 \\ + 453 \\ 1 \\ \hline 895 \end{array}$ |

Challenge

Can you find a pair of 3-digit numbers which add to give exactly 1000? All six digits must be different!

e.g. $864 + 146$

or

$321 + 67$

More addition and subtraction

Answers

Day 1 Y4 Adding 3-digit numbers using compact addition Sheet 3

All the columns will add up to the same number, e.g.

$$\begin{array}{r} 357 \\ +753 \\ \hline 1110 \end{array}$$

$$\begin{array}{r} 468 \\ +864 \\ \hline 1332 \end{array}$$

$$\begin{array}{r} 246 \\ +642 \\ \hline 888 \end{array}$$

$$\begin{array}{r} 579 \\ +975 \\ \hline 1554 \end{array}$$

$$\begin{array}{r} 135 \\ +531 \\ \hline 666 \end{array}$$

Challenge

What happens with 4-digit numbers, e.g. $2468 + 8642 = ?$

The same thing happens. All the columns add up to the same number.

Day 2 Y3 Adding 2-digit numbers Sheet 1

Set A

$36 + 25 = 61$

$42 + 19 = 61$

$27 + 46 = 73$

$44 + 38 = 82$

$19 + 64 = 83$

$57 + 25 = 82$

$49 + 33 = 82$

$68 + 23 = 91$

Set B

$56 + 25 = 81$

$82 + 47 = 129$

$44 + 62 = 106$

$91 + 36 = 127$

$55 + 54 = 109$

$72 + 43 = 115$

$66 + 73 = 139$

$88 + 31 = 119$

Challenge

Set A: The largest is $68 + 64 = 132$

The smallest is $19 + 19 = 38$

Set B: The largest is $91 + 88 = 179$

The smallest is $25 + 31 = 56$

Day 2 Y3 Adding 2-digit numbers Sheet 2

$28 + 79 = 107$

$99 + 57 = 156$

$64 + 58 = 122$

$87 + 65 = 152$

$98 + 78 = 176$

$59 + 67 = 126$

$46 + 88 = 134$

$75 + 67 = 142$

Challenge

The largest is $99 + 98 = 197$

The smallest is $28 + 46 = 74$

$98 + 57$ and $88 + 67$ both give an answer of 155.

Challenge

$28p + 79p = \text{£}1.07$

$99p + 57p = \text{£}1.56$

$64p + 58p = \text{£}1.22$

$87p + 65p = \text{£}1.52$

$98p + 78p = \text{£}1.76$

$59p + 67p = \text{£}1.26$

$46p + 88p = \text{£}1.34$

$75p + 67p = \text{£}1.42$

More addition and subtraction

Answers

Day 2 Y4 Addition word problems with three 3-digit numbers Sheet 3

243 +

$243 + 315 = 558$

$243 + 482 = 725$

$243 + 537 = 780$

$243 + 303 = 546$

315 +

$315 + 243 = 558$

$315 + 482 = 797$

$315 + 537 = 852$

$315 + 303 = 618$

482 +

$482 + 243 = 725$

$482 + 315 = 797$

$482 + 537 = 1019$

$482 + 303 = 785$

537 +

$537 + 243 = 780$

$537 + 315 = 852$

$537 + 482 = 1019$

$537 + 303 = 840$

303 +

$303 + 243 = 546$

$303 + 315 = 618$

$303 + 482 = 785$

$303 + 537 = 840$

1.

$$\begin{array}{r} 125 \\ + 136 \\ \hline 1 \\ \hline \text{£}261 \end{array}$$

They pay £261 altogether.

2.

$$\begin{array}{r} 130 \\ + 140 \\ + 125 \\ \hline 395 \text{ cm} \end{array}$$

They are 395cm tall altogether.

3.

$$\begin{array}{r} 125 \\ + 125 \\ \hline 125 \\ \hline 1 \\ \hline 375 \end{array}$$

They have 375 stickers.

Day 2 Y4 Addition word problems with three 3-digit numbers Sheet 4

247 +

$247 + 375 = 622$

$247 + 482 = 729$

$247 + 539 = 786$

$247 + 363 = 610$

375 +

$375 + 247 = 622$

$375 + 482 = 857$

$375 + 539 = 914$

$375 + 363 = 738$

482 +

$482 + 247 = 729$

$482 + 375 = 857$

$482 + 539 = 1021$

$482 + 363 = 845$

539 +

$539 + 247 = 786$

$539 + 375 = 914$

$539 + 482 = 1021$

$539 + 363 = 902$

363 +

$363 + 247 = 610$

$363 + 375 = 738$

$363 + 482 = 845$

$363 + 539 = 902$

1.

$$\begin{array}{r} 130 \\ + 132 \\ + 127 \\ \hline \end{array}$$

389 cm

They are 389cm tall altogether.

2.

$$\begin{array}{r} 134 \\ + 129 \\ + 135 \\ \hline 1 \\ \hline \end{array}$$

£398

All 3 bikes cost £398.

3.

$$\begin{array}{r} 342 \\ + 451 \\ + 124 \\ \hline 1 \\ \hline \end{array}$$

917

They score 917 points altogether.

4.

$$\begin{array}{r} 630 \\ + 723 \\ + 215 \\ \hline 1 \\ \hline \end{array}$$

1568

They score 1568 points altogether.

5.

$$\begin{array}{r} 223 \\ + 197 \\ + 478 \\ \hline 11 \\ \hline \end{array}$$

898

He has 898 animals.

6.

$$\begin{array}{r} 651 \\ + 574 \\ + 842 \\ \hline 21 \\ \hline \end{array}$$

2067

She has 2067 animals.

More addition and subtraction

Answers

Day 3 Y3 Adding 2-digit numbers Sheet 1

- $36 + 23 = 59$
- $54 + 24 = 78$
- $67 + 21 = 88$
- $65 + 25 = 90$
- $36 + 47 + 54 = 137$
- $42 + 28 + 38 = 108$
- $53 + 27 + 41 = 121$
- $52 + 62 + 38 = 152$
- $42 + 37 + 48 = 127$
- $55 + 32 + 25 = 112$
- Ellie spent £88 altogether.
- Daniel spent £101 altogether.
- $146 + 58 + 47 = 251$
- $241 + 27 + 18 = 286$
- $135 + 28 + 36 = 199$
- $127 + 54 + 31 = 212$

Day 3 Y4 Adding three numbers Sheet 2

Part 1

- | | |
|---------------------|----------------------|
| $12 + 13 + 22 = 47$ | $20 + 16 + 24 = 60$ |
| $32 + 14 + 27 = 73$ | $27 + 21 + 34 = 82$ |
| $36 + 33 + 24 = 93$ | $55 + 44 + 32 = 131$ |

Part 2

- | | |
|----------------------|----------------------|
| $21 + 42 + 34 = 97$ | $32 + 47 + 46 = 125$ |
| $34 + 25 + 42 = 101$ | $46 + 51 + 28 = 125$ |
| $51 + 62 + 45 = 158$ | $67 + 72 + 39 = 178$ |
| $48 + 46 + 53 = 147$ | $74 + 63 + 86 = 223$ |

Part 3

- | | |
|----------------------|----------------------|
| $47 + 66 + 58 = 171$ | $66 + 58 + 45 = 169$ |
| $47 + 66 + 45 = 158$ | $66 + 58 + 74 = 198$ |
| $47 + 66 + 74 = 187$ | $66 + 45 + 74 = 185$ |
| $47 + 58 + 45 = 150$ | $58 + 45 + 74 = 177$ |
| $47 + 58 + 74 = 179$ | $47 + 45 + 74 = 166$ |

Challenge

The numbers were:

$$73 + 74 + 75 = 222$$

More addition and subtraction

Answers

Day 3 Y4 Adding four numbers Sheet 3

Part 1

$11 + 23 + 12 + 31 = 77$

$24 + 15 + 23 + 11 = 73$

$32 + 61 + 45 + 56 = 194$

$35 + 21 + 14 + 32 = 102$

$41 + 10 + 22 + 53 = 126$

$58 + 72 + 63 + 64 = 257$

Part 2

$62 + 75 + 84 + 53 = 274$

$83 + 81 + 94 + 37 = 295$

$84 + 72 + 85 + 96 = 337$

$76 + 71 + 27 + 82 = 256$

$95 + 12 + 60 + 76 = 243$

$98 + 89 + 78 + 97 = 362$

Part 3

Examples include:

$202 = 48 + 17 + 83 + 54$

$191 = 23 + 38 + 69 + 61$

$333 = 81 + 82 + 83 + 87$

$252 = 49 + 74 + 83 + 46$

Challenge

393 is the largest possible answer, e.g. $99 + 99 + 98 + 97$