



# Year 4 Mathematics

## Subtraction Skills Workshop

### Worksheet 9: The Vertical Algorithm & Trading

Name: \_\_\_\_\_

Date: \_\_\_\_\_

#### Section 1: Fluency - Vertical Subtraction with No Trading

Solve these subtraction problems using the vertical algorithm. No borrowing needed!

1. Calculate:

$$589 - 243$$

	5	8	9
-	2	4	3

Answer: \_\_\_\_\_

2. Calculate:

$$876 - 542$$

Answer: \_\_\_\_\_

3. Calculate:

$$695 - 321$$

Answer: \_\_\_\_\_



4. Calculate:

$$957 - 624$$

Answer: \_\_\_\_\_

5. Calculate:

$$788 - 455$$

Answer: \_\_\_\_\_

6. Calculate:

$$4,897 - 2,653$$

Answer: \_\_\_\_\_

7. Calculate:

$$6,789 - 3,456$$

Answer: \_\_\_\_\_

8. Calculate:

$$9,876 - 5,432$$

Answer: \_\_\_\_\_



## Subtraction Superstar!

*Why was the minus sign so good at maths?*



*Because it always knew how to take things away!*





## Section 2: Fluency - Vertical Subtraction with Trading

Use trading (borrowing) when the top digit is smaller than the bottom digit.

9. Calculate:

$$524 - 168$$

-	5	2	4
-	1	6	8

Answer: \_\_\_\_\_

10. Calculate:

$$643 - 287$$

Answer: \_\_\_\_\_

11. Calculate:

$$815 - 369$$

Answer: \_\_\_\_\_

12. Calculate:

$$4,532 - 1,675$$

-	4	5	3	2
-	1	6	7	5

Answer: \_\_\_\_\_



13. Calculate:

$$6,004 - 2,358$$

Answer: \_\_\_\_\_

14. Calculate:

$$7,205 - 3,867$$

Answer: \_\_\_\_\_

15. Calculate:

$$5,000 - 1,234$$

Answer: \_\_\_\_\_

16. Calculate:

$$8,421 - 5,678$$

Answer: \_\_\_\_\_

### Trading Champion!

ERASER



--Gops!

*Why did the number need to borrow?*

*Because it didn't have enough on its own!*



### Section 3: Reasoning - Check with Addition

Solve the subtraction, then add your answer to the smaller number to check your work.

17. Solve

$$4,532 - 1,218$$

. Then, add your answer to

$$1,218$$

to see if you get

$$4,532$$

Subtraction answer: \_\_\_\_\_

Check (addition): \_\_\_\_\_

18. Solve

$$6,845 - 2,397$$

. Check your answer by adding.

Subtraction answer: \_\_\_\_\_

Check (addition): \_\_\_\_\_

19. Calculate

$$3,600 - 1,478$$

. Verify your answer using addition.



Subtraction answer: \_\_\_\_\_

Check (addition): \_\_\_\_\_

**20. Solve**

$$5,204 - 3,856$$

. Check by adding your answer to

$$3,856$$

Subtraction answer: \_\_\_\_\_

Check (addition): \_\_\_\_\_

**21. Calculate**

$$7,000 - 2,674$$

. Verify using the inverse operation.

Subtraction answer: \_\_\_\_\_

Check (addition): \_\_\_\_\_

**22.** A shop had 4,825 items in stock. They sold 1,967 items. How many items are left? Check your answer.

Answer: \_\_\_\_\_



23. Solve

$$8,341 - 5,489$$

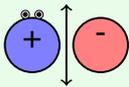
. Use addition to verify.

Subtraction answer: \_\_\_\_\_

Check (addition): \_\_\_\_\_

### Checking Champion!

*Why do addition and subtraction make great friends?*



*Because they always check on each other!*

**Fantastic work! You've mastered the algorithm!**



# Answer Key

## Worksheet 9: The Vertical Algorithm & Trading

### Section 1: Fluency - Vertical Subtraction with No Trading

1. Answer: **346**

Working:

$$589 - 243 = 346$$

2. Answer: **334**

3. Answer: **374**

4. Answer: **333**

5. Answer: **333**

6. Answer: **2,244**

7. Answer: **3,333**

8. Answer: **4,444**

### Section 2: Fluency - Vertical Subtraction with Trading

9. Answer: **356**

Working: Trade 1 ten from 2 tens, making it 14 ones.

$$14 - 8 = 6$$

,

$$1 - 6$$

requires trading, etc.

10. Answer: **356**

11. Answer: **446**

12. Answer: **2,857**

13. Answer: **3,646**



14. Answer: **3,338**

15. Answer: **3,766**

16. Answer: **2,743**

### Section 3: Reasoning - Check with Addition

17. Subtraction answer: **3,314**

Check:

$$3,314 + 1,218 = 4,532$$

**Correct**

18. Subtraction answer: **4,448**

Check:

$$4,448 + 2,397 = 6,845$$

**Correct**

19. Subtraction answer: **2,122**

Check:

$$2,122 + 1,478 = 3,600$$

**Correct**

20. Subtraction answer: **1,348**

Check:

$$1,348 + 3,856 = 5,204$$

**Correct**

21. Subtraction answer: **4,326**

Check:

$$4,326 + 2,674 = 7,000$$

**Correct**

22. Answer: **2,858 items**

Working:

$$4,825 - 1,967 = 2,858$$

23. Subtraction answer: **2,852**



Check:

$$2,852 + 5,489 = 8,341$$

**Correct**





# Year 4 Mathematics

## Subtraction Skills Workshop

### Worksheet 10: Mental Strategies & Practical Problems

Name: \_\_\_\_\_

Date: \_\_\_\_\_

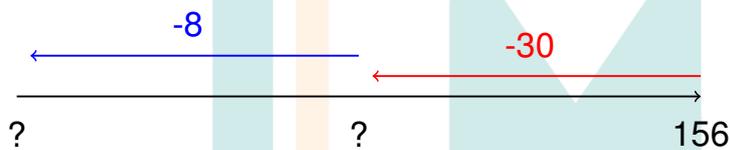
#### Section 1: Fluency - The Jump Strategy

Use a number line to "jump back" by tens and ones.

1. Solve

$$156 - 38$$

by jumping back 30, then jumping back 8.



Answer: \_\_\_\_\_

2. Use the jump strategy to solve

$$245 - 67$$

. Jump back 60, then jump back 7.

Answer: \_\_\_\_\_

3. Solve

$$324 - 89$$

using jumps. First jump back 80, then jump back 9.



Answer: \_\_\_\_\_

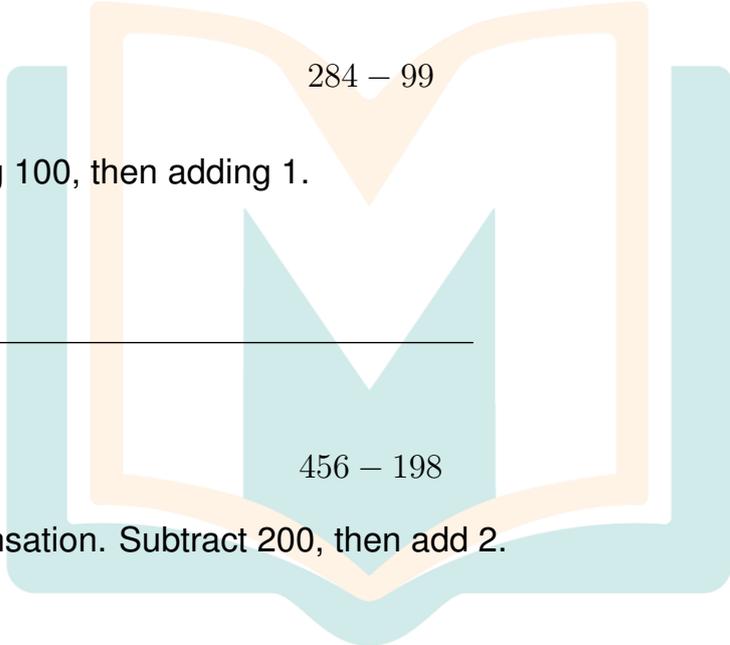
4. Calculate

$$512 - 145$$

by jumping back in parts (100, 40, then 5).

Answer: \_\_\_\_\_

5. Use the compensation strategy: Solve


$$284 - 99$$

by subtracting 100, then adding 1.

Answer: \_\_\_\_\_

6. Solve

$$456 - 198$$

using compensation. Subtract 200, then add 2.

Answer: \_\_\_\_\_

7. Calculate

$$673 - 297$$

by subtracting 300, then adding 3.

Answer: \_\_\_\_\_

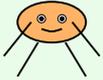
8. Use the "think addition" strategy: What do you add to 48 to get 125?



Answer: \_\_\_\_\_

### Jump Master!

*Why did the kangaroo love subtraction?*



*Because it was an expert at jumping backwards!*





## Section 2: Problem Solving - Budgeting & Money

Solve real-world problems involving money and subtraction.

9. A student had \$150 saved. They bought a skateboard for \$87. How much money do they have left?

$$\boxed{\$150} \xrightarrow{-\$87} \boxed{?}$$

Answer: \_\_\_\_\_

10. Emma had \$245 in her bank account. She spent \$128 on a new bike. How much does she have left?

Answer: \_\_\_\_\_

11. A shop had \$3,450 in the cash register. They paid \$1,875 to suppliers. How much is left?

Answer: \_\_\_\_\_

12. Jack saved \$420 for a holiday. He spent \$185 on flights. How much does he have remaining?

Answer: \_\_\_\_\_

13. A charity raised \$5,000. They spent \$2,340 on supplies. How much money is left?

Answer: \_\_\_\_\_



14. A family budgeted \$800 for groceries this month. They have spent \$567 so far. How much is left in their budget?

Answer: \_\_\_\_\_

15. A school fundraiser earned \$2,456. They used \$1,289 for new equipment. What is the remaining amount?

Answer: \_\_\_\_\_

16. Tom had \$95 in his wallet. He bought lunch for \$23 and a book for \$38. How much does he have left?

Answer: \_\_\_\_\_

### Budget Boss!



*Why was the piggy bank so good at maths?  
Because it always knew how to save the difference!*



### Section 3: Challenge - Multi-step Subtraction

Solve problems that require more than one subtraction step.

17. A stadium has 5,000 seats. 2,150 people are in the North stand and 1,800 are in the South stand. How many empty seats are left?

Answer: \_\_\_\_\_

18. A library has 4,500 books. On Monday, 1,234 books were borrowed. On Tuesday, 876 more were borrowed. How many books are still in the library?

Answer: \_\_\_\_\_

19. A bakery made 3,600 cupcakes. They sold 1,450 in the morning and 980 in the afternoon. How many cupcakes are left?

Answer: \_\_\_\_\_

20. A farmer had 6,000 apples. He sold 2,345 apples to one shop and 1,678 apples to another. How many apples does he have left?

Answer: \_\_\_\_\_

21. A school ordered 8,000 pencils. Grade 3 used 1,567 pencils and Grade 4 used 2,123 pencils. How many pencils remain?

Answer: \_\_\_\_\_

22. A toy store had 2,800 toys in stock. They sold 945 toys on Saturday and



678 toys on Sunday. How many toys are left?

Answer: \_\_\_\_\_

**23.** A concert venue has 7,500 tickets available. They sold 3,256 tickets online and 2,189 tickets at the door. How many tickets are unsold?

Answer: \_\_\_\_\_

**24.** A factory produced 9,000 bottles. They shipped 4,125 bottles to Sydney and 2,678 bottles to Melbourne. How many bottles are left at the factory?

Answer: \_\_\_\_\_

### **Difference Dynamo!**



*Why did the maths problem go to the gym?*

*To work on its multi-step skills!*

**Amazing! You've conquered subtraction challenges!**



# Answer Key

## Worksheet 10: Mental Strategies & Practical Problems

### Section 1: Fluency - The Jump Strategy

1. Answer: **118**

Working:

$$156 - 30 = 126$$

, then

$$126 - 8 = 118$$

2. Answer: **178**

Working:

$$245 - 60 = 185$$

, then

$$185 - 7 = 178$$

3. Answer: **235**

Working:

$$324 - 80 = 244$$

, then

$$244 - 9 = 235$$

4. Answer: **367**

Working:

$$512 - 100 = 412$$

,

$$412 - 40 = 372$$

,

$$372 - 5 = 367$$



5. Answer: **185**

Working:

$$284 - 100 = 184$$

, then

$$184 + 1 = 185$$

6. Answer: **258**

Working:

$$456 - 200 = 256$$

, then

$$256 + 2 = 258$$

7. Answer: **376**

Working:

$$673 - 300 = 373$$

, then

$$373 + 3 = 376$$

8. Answer: **77**

Working:

$$48 + 77 = 125$$

, so

$$125 - 48 = 77$$

## Section 2: Problem Solving - Budgeting & Money

9. Answer: **\$63**

Working:

$$\$150 - \$87 = \$63$$

10. Answer: **\$117**

Working:

$$\$245 - \$128 = \$117$$



11. Answer: **\$1,575**

Working:

$$\$3,450 - \$1,875 = \$1,575$$

12. Answer: **\$235**

Working:

$$\$420 - \$185 = \$235$$

13. Answer: **\$2,660**

Working:

$$\$5,000 - \$2,340 = \$2,660$$

14. Answer: **\$233**

Working:

$$\$800 - \$567 = \$233$$

15. Answer: **\$1,167**

Working:

$$\$2,456 - \$1,289 = \$1,167$$

16. Answer: **\$34**

Working:

$$\$95 - \$23 = \$72$$

, then

$$\$72 - \$38 = \$34$$

(Or:

$$\$23 + \$38 = \$61$$

, then

$$\$95 - \$61 = \$34$$

)

### Section 3: Challenge - Multi-step Subtraction

17. Answer: **1,050 empty seats**



Working:

$$2,150 + 1,800 = 3,950$$

, then

$$5,000 - 3,950 = 1,050$$

**18. Answer: 2,390 books**

Working:

$$1,234 + 876 = 2,110$$

, then

$$4,500 - 2,110 = 2,390$$

**19. Answer: 1,170 cupcakes**

Working:

$$1,450 + 980 = 2,430$$

, then

$$3,600 - 2,430 = 1,170$$

**20. Answer: 1,977 apples**

Working:

$$2,345 + 1,678 = 4,023$$

, then

$$6,000 - 4,023 = 1,977$$

**21. Answer: 4,310 pencils**

Working:

$$1,567 + 2,123 = 3,690$$

, then

$$8,000 - 3,690 = 4,310$$

**22. Answer: 1,177 toys**

Working:

$$945 + 678 = 1,623$$



, then

$$2,800 - 1,623 = 1,177$$

**23. Answer: 2,055 tickets**

Working:

$$3,256 + 2,189 = 5,445$$

, then

$$7,500 - 5,445 = 2,055$$

**24. Answer: 2,197 bottles**

Working:

$$4,125 + 2,678 = 6,803$$

, then

$$9,000 - 6,803 = 2,197$$

## Congratulations!

You are now a Subtraction Expert!

Keep practicing your mental strategies and you'll  
be unstoppable!