Merit Tutoring

Year 4 Mathematics

Finding Missing Numbers Workshop

Worksheet 27: Addition & Subtraction Unknowns

Name: _____ **Date:** _____

Section 1: Fluency - Missing Middle Numbers

Find the unknown value in each equation.

1.

$$45 + \square = 100$$

Answer: _____

2.

$$120 - \square = 80$$

Answer: _____

3.

$$35 + \square = 62$$

Answer: _____

4.

$$90 - \square = 55$$

Answer: _____

5.

$$68 + \square = 100$$

Answer: _____

6.

$$200 - \square = 145$$

Answer: _____

7.

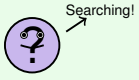
$$54 + \square = 89$$

Answer: _____

8.

$$150 - \square = 72$$

Answer: _____



Missing Number Master!

Why did the number hide?

Because it wanted someone to find it!

Section 2: Reasoning - Missing Start Numbers

Find the unknown value at the start of each equation and explain your thinking.

9.

$$\square + 25 = 60$$

Explain the subtraction you used to find the answer:

Explanation: _____

Answer: _____

10.

$$\square - 18 = 42$$

Answer: _____

11. Look at this part-whole bar model:

Total: 80

?	35

Write the equation: _____

What is the missing part?

Answer: _____

12.

$$\square + 47 = 100$$

Answer: _____

13.

$$\square - 56 = 84$$

Answer: _____

14. If $\square + 33 = 75$, what strategy did you use to solve it?

Strategy: _____

Answer: _____

15.

$$\square - 29 = 51$$

Answer: _____

16. Complete:

$$\square + 65 = 120$$

Answer: _____

Inverse Operation Ace!

Why did the addition problem need subtraction?

Because they're opposite friends who help each other!

Section 3: Fluency - Larger Numbers

Solve equations with 3-digit and 4-digit numbers.

17.

$$1{,}200 + \square = 1{,}550$$

Answer: _____

18.

$$850 - \square = 425$$

Answer: _____

19.

$$\square + 275 = 800$$

Answer: _____

20.

$$2{,}400 - \square = 1{,}650$$

Answer: _____

21.

$$\square + 450 = 1{,}000$$

Answer: _____

22.

$$3{,}500 - \square = 2{,}850$$

Answer: _____

23.

$$675 + \square = 1{,}200$$

Answer: _____

24. Challenge:

$$\square - 1{,}234 = 2{,}876$$

Answer: _____

Large Number Legend!

Why did the big number feel confident?

Because it knew it could solve any equation!

Excellent work! You're an equation expert!

Answer Key

Worksheet 27: Addition & Subtraction Unknowns

Section 1: Fluency - Missing Middle Numbers

1. Answer: **55**
Working:

$$100 - 45 = 55$$

2. Answer: **40**
Working:

$$120 - 80 = 40$$

3. Answer: **27**
Working:

$$62 - 35 = 27$$

4. Answer: **35**
Working:

$$90 - 55 = 35$$

5. Answer: **32**
Working:

$$100 - 68 = 32$$

6. Answer: **55**
Working:

$$200 - 145 = 55$$

7. Answer: **35**
Working:

$$89 - 54 = 35$$

8. Answer: **78**

Working:

$$150 - 72 = 78$$

Section 2: Reasoning - Missing Start Numbers

9. Explanation: **I used**

$$60 - 25 = 35$$

because subtraction is the inverse of addition.

Answer: **35**

10. Answer: **60**

Working:

$$42 + 18 = 60$$

11. Equation:

$$\square + 35 = 80$$

Missing part: **45**

Working:

$$80 - 35 = 45$$

12. Answer: **53**

Working:

$$100 - 47 = 53$$

13. Answer: **140**

Working:

$$84 + 56 = 140$$

14. Strategy: **I subtracted 33 from 75 using inverse operations**

Answer: **42**

Working:

$$75 - 33 = 42$$

15. Answer: **80**

Working:

$$51 + 29 = 80$$

16. Answer: **55**

Working:

$$120 - 65 = 55$$

Section 3: Fluency - Larger Numbers

17. Answer: **350**

Working:

$$1{,}550 - 1{,}200 = 350$$

18. Answer: **425**

Working:

$$850 - 425 = 425$$

19. Answer: **525**

Working:

$$800 - 275 = 525$$

20. Answer: **750**

Working:

$$2{,}400 - 1{,}650 = 750$$

21. Answer: **550**

Working:

$$1{,}000 - 450 = 550$$

22. Answer: **650**

Working:

$$3{,}500 - 2{,}850 = 650$$

23. Answer: **525**

Working:

$$1{,}200 - 675 = 525$$

24. Answer: **4,110**

Working:

$$2{,}876 + 1{,}234 = 4{,}110$$

Merit Tutoring

Year 4 Mathematics

Finding Missing Numbers Workshop

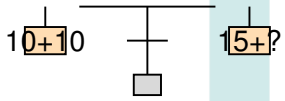
Worksheet 28: Balancing & Practical Modelling

Name: _____ **Date:** _____

Section 1: Fluency - Balancing the Scales

Find the missing number to make both sides equal.

1. Look at this balance scale:



One side has $10 + 10$. The other side has $15 + \square$.

What is the missing number to make it balance?

Answer: _____

2. Balance this equation:

$$25 + 15 = 30 + \square$$

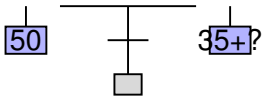
Answer: _____

3.

$$40 + 20 = \square + 35$$

Answer: _____

4. Look at this balance:



Write the equation: _____

Missing number: _____

5.

$$100 = 45 + \square$$

Answer: _____

6.

$$60 + 30 = 70 + \square$$

Answer: _____

7.

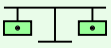
$$\square + 28 = 50 + 10$$

Answer: _____

8.

$$75 + 25 = \square + 50$$

Answer: _____



Balance Master!

Why was the equals sign so humble?

Because it knew it wasn't less than or greater than anyone else!

Section 2: Problem Solving - Word Problems

Solve real-world problems and write number sentences.

9. Sarah had some marbles. She gave 12 to her brother and now has 28 left. How many did she start with?

Write a number sentence with a box for the missing number:

Number sentence: _____

Answer: _____

10. Tom collected some shells at the beach. He found 15 more and now has 43 shells. How many did he have at the start?

Number sentence: _____

Answer: _____

11. A library had 150 books. Some were borrowed and now there are 87 left. How many were borrowed?

Number sentence: _____

Answer: _____

12. Emma saved some money. She spent $25 on a game and has $48 left. How much did she have originally?

Number sentence: _____

Answer: _____

13. A farmer had 200 apples. He sold some and has 135 left. How many did he sell?

Number sentence: _____

Answer: _____

14. Jack had some toy cars. His friend gave him 18 more and now he has 52. How many did Jack have to begin with?

Number sentence: _____

Answer: _____

15. A school has 85 students in Year 4. Some more students enrolled and now there are 100 students. How many new students enrolled?

Number sentence: _____

Answer: _____

Word Problem Wizard!

Why did the word problem go to the gym?

To work out the answer!

Section 3: Challenge - Two-step Balance

Solve more complex balancing equations.

16.

$$20 + 20 = 50 - \square$$

Answer: _____

17.

$$100 - 35 = 45 + \square$$

Answer: _____

18.

$$75 - \square = 30 + 20$$

Answer: _____

19.

$$\square + 45 = 100 - 25$$

Answer: _____

20.

$$60 + 40 = 120 - \square$$

Answer: _____

21. Super Challenge:

$$35 + \square = 90 - 20$$

Answer: _____

22.

$$150 - 60 = \square + 40$$

Answer: _____

23. Ultimate Challenge:

$$\square - 28 = 65 + 15$$

Answer: _____

Equation Expert!

Why did the equation get a medal?

Because it balanced everything perfectly!

Amazing work! You're a missing number champion!

Answer Key

Worksheet 28: Balancing & Practical Modelling

Section 1: Fluency - Balancing the Scales

1. Answer: **5**

Working: Left side = $10 + 10 = 20$. Right side needs $15 + 5 = 20$

2. Answer: **10**

Working: Left side = $25 + 15 = 40$. Right side: $30 + 10 = 40$

3. Answer: **25**

Working: Left side = $40 + 20 = 60$. Right side: $25 + 35 = 60$

4. Equation: $50 = 35 + \square$

Missing number: **15**

Working: $50 - 35 = 15$

5. Answer: **55**

Working:

$$100 - 45 = 55$$

6. Answer: **20**

Working: Left =

$$60 + 30 = 90$$

. Right:

$$70 + 20 = 90$$

7. Answer: **32**

Working: Right side =

$$50 + 10 = 60$$

. So

$$32 + 28 = 60$$

8. Answer: **50**

Working: Left =

$$75 + 25 = 100$$

. Right:

$$50 + 50 = 100$$

Section 2: Problem Solving - Word Problems

9. Number sentence:

$$\square - 12 = 28$$

Answer: **40 marbles**

Working:

$$28 + 12 = 40$$

10. Number sentence:

$$\square + 15 = 43$$

Answer: **28 shells**

Working:

$$43 - 15 = 28$$

11. Number sentence:

$$150 - \square = 87$$

Answer: **63 books**

Working:

$$150 - 87 = 63$$

12. Number sentence:

$$\square - 25 = 48$$

Answer: **$73**

Working:

$$48 + 25 = 73$$

13. Number sentence:

$$200 - \square = 135$$

Answer: **65 apples**

Working:

$$200 - 135 = 65$$

14. Number sentence:

$$\square + 18 = 52$$

Answer: **34 toy cars**

Working:

$$52 - 18 = 34$$

15. Number sentence:

$$85 + \square = 100$$

Answer: **15 students**

Working:

$$100 - 85 = 15$$

Section 3: Challenge - Two-step Balance

16. Answer: **10**

Working: Left =

$$20 + 20 = 40$$

. So

$$50 - 10 = 40$$

17. Answer: **20**

Working: Left =

$$100 - 35 = 65$$

. So

$$45 + 20 = 65$$

18. Answer: **25**

Working: Right =

$$30 + 20 = 50$$

. So

$$75 - 25 = 50$$

19. Answer: **30**

Working: Right =

$$100 - 25 = 75$$

. So

$$30 + 45 = 75$$

20. Answer: **20**

Working: Left =

$$60 + 40 = 100$$

. So

$$120 - 20 = 100$$

21. Answer: **35**

Working: Right =

$$90 - 20 = 70$$

. So

$$35 + 35 = 70$$

22. Answer: **50**

Working: Left =

$$150 - 60 = 90$$

. So

$$50 + 40 = 90$$

23. Answer: **108**

Working: Right =

$$65 + 15 = 80$$

. So

$$108 - 28 = 80$$

Phenomenal Performance!

You've mastered finding missing numbers!

Keep solving equations and balancing problems!