

Grade 2 Advanced Workbook

19 lessons · printable · answer key at the back

Name _____

Date _____

Contents

Chapter 1 · Addition and Subtraction Facts

1-1 Adding within 20	1
1-2 Subtracting within 20	2
1-3 Adding within 50	3
1-4 Subtracting within 50	4
1-5 Adding within 100	5
1-6 Subtracting within 100	6

Chapter 2 · Place Value and Written Methods

2-1 Hundreds, Tens and Ones	7
2-2 Column Addition	8
2-3 Column Subtraction	10

Chapter 3 · Patterns, Time and Shapes

3-1 Number Patterns	11
3-2 True, False or Fix It	12
3-3 Telling the Time	13
3-4 Naming Shapes	15
3-5 Equal Shares	16
3-6 Picture Graphs and Bar Graphs	17
3-7 Line Plots	19

Chapter 4 · Problem Solving and Review

4-1 Word Problems	20
4-2 Review: Facts within 20	22
4-3 Review: Two-Digit Numbers	23

WORKED EXAMPLE

$4 + 4 = \underline{8}$

1. Addition

Work out each sum.

- | | | | |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| 1 $6 + 11 = \underline{\quad}$ | 2 $0 + 20 = \underline{\quad}$ | 3 $9 + 1 = \underline{\quad}$ | 4 $9 + 9 = \underline{\quad}$ |
| 5 $3 + 13 = \underline{\quad}$ | 6 $0 + 19 = \underline{\quad}$ | 7 $3 + 16 = \underline{\quad}$ | 8 $13 + 4 = \underline{\quad}$ |
| 9 $13 + 7 = \underline{\quad}$ | 10 $15 + 5 = \underline{\quad}$ | 11 $1 + 16 = \underline{\quad}$ | 12 $7 + 12 = \underline{\quad}$ |
| 13 $12 + 7 = \underline{\quad}$ | 14 $3 + 14 = \underline{\quad}$ | 15 $2 + 18 = \underline{\quad}$ | 16 $14 + 6 = \underline{\quad}$ |
| 17 $16 + 0 = \underline{\quad}$ | 18 $4 + 14 = \underline{\quad}$ | 19 $7 + 11 = \underline{\quad}$ | 20 $2 + 9 = \underline{\quad}$ |
| 21 $17 + 2 = \underline{\quad}$ | 22 $18 + 0 = \underline{\quad}$ | 23 $10 + 8 = \underline{\quad}$ | 24 $1 + 15 = \underline{\quad}$ |
| 25 $7 + 9 = \underline{\quad}$ | 26 $1 + 17 = \underline{\quad}$ | 27 $5 + 12 = \underline{\quad}$ | 28 $3 + 17 = \underline{\quad}$ |
| 29 $4 + 15 = \underline{\quad}$ | | | |

2. Word problems: adding

Read each problem. Write the answer.

- 30 Nina has 6 apples. Leo has 4.

How many apples do they have in all?

- 31 Maya and Zoe have some pencils. Maya has 9 and Zoe has 6.

How many pencils do the two of them have in total?

- 32 Zoe already had 11 cookies by the school gate, and then collected 7 more.

How many cookies does Zoe have in all?

Subtracting within 20

WORKED EXAMPLE

$$17 - 5 = \underline{12}$$

3. Subtraction

Work out each difference.

- | | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 1 $15 - 11 = \underline{\quad}$ | 2 $18 - 6 = \underline{\quad}$ | 3 $17 - 17 = \underline{\quad}$ | 4 $18 - 8 = \underline{\quad}$ |
| 5 $15 - 13 = \underline{\quad}$ | 6 $20 - 8 = \underline{\quad}$ | 7 $18 - 4 = \underline{\quad}$ | 8 $16 - 5 = \underline{\quad}$ |
| 9 $18 - 9 = \underline{\quad}$ | 10 $18 - 11 = \underline{\quad}$ | 11 $11 - 3 = \underline{\quad}$ | 12 $20 - 1 = \underline{\quad}$ |
| 13 $19 - 14 = \underline{\quad}$ | 14 $17 - 12 = \underline{\quad}$ | 15 $19 - 12 = \underline{\quad}$ | 16 $14 - 7 = \underline{\quad}$ |
| 17 $16 - 12 = \underline{\quad}$ | 18 $17 - 9 = \underline{\quad}$ | 19 $20 - 2 = \underline{\quad}$ | 20 $13 - 9 = \underline{\quad}$ |
| 21 $18 - 7 = \underline{\quad}$ | 22 $20 - 16 = \underline{\quad}$ | 23 $18 - 17 = \underline{\quad}$ | 24 $12 - 3 = \underline{\quad}$ |
| 25 $15 - 6 = \underline{\quad}$ | 26 $20 - 14 = \underline{\quad}$ | 27 $15 - 12 = \underline{\quad}$ | 28 $19 - 19 = \underline{\quad}$ |
| 29 $18 - 14 = \underline{\quad}$ | 30 $13 - 8 = \underline{\quad}$ | 31 $20 - 6 = \underline{\quad}$ | 32 $19 - 7 = \underline{\quad}$ |
| 33 $15 - 3 = \underline{\quad}$ | | | |

4. Word problems: subtracting

Read each problem. Write the answer.

- 34 Max and Ava share 12 stickers, and 8 of them are Max's.

How many stickers belong to Ava?

- 35 Nina had 12 apples and was given some more, ending with 19 apples.

How many apples did Nina get?

- 36 Leo had 5 cookies and collected some more, ending with 8 cookies.

How many cookies did Leo collect?

WORKED EXAMPLE

$$27 + 11 = \underline{38}$$

5. Addition

Work out each sum.

- | | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 1 $13 + 25 = \underline{\quad}$ | 2 $35 + 13 = \underline{\quad}$ | 3 $3 + 34 = \underline{\quad}$ | 4 $32 + 18 = \underline{\quad}$ |
| 5 $21 + 23 = \underline{\quad}$ | 6 $17 + 25 = \underline{\quad}$ | 7 $14 + 32 = \underline{\quad}$ | 8 $15 + 22 = \underline{\quad}$ |
| 9 $23 + 25 = \underline{\quad}$ | 10 $29 + 20 = \underline{\quad}$ | 11 $16 + 14 = \underline{\quad}$ | 12 $12 + 35 = \underline{\quad}$ |
| 13 $8 + 29 = \underline{\quad}$ | 14 $6 + 27 = \underline{\quad}$ | 15 $8 + 33 = \underline{\quad}$ | 16 $28 + 19 = \underline{\quad}$ |
| 17 $26 + 6 = \underline{\quad}$ | 18 $32 + 9 = \underline{\quad}$ | 19 $29 + 18 = \underline{\quad}$ | 20 $18 + 6 = \underline{\quad}$ |
| 21 $13 + 28 = \underline{\quad}$ | 22 $45 + 2 = \underline{\quad}$ | 23 $46 + 3 = \underline{\quad}$ | 24 $15 + 23 = \underline{\quad}$ |
| 25 $5 + 37 = \underline{\quad}$ | 26 $30 + 17 = \underline{\quad}$ | 27 $3 + 31 = \underline{\quad}$ | 28 $16 + 31 = \underline{\quad}$ |

6. Word problems: adding

Read each problem. Write the answer.

- 29 Nina has 20 stickers. Max has 11.

How many stickers do they have in all?

- 30 Ava gave away 4 apples and has 12 apples left.

How many apples did Ava start with?

- 31 Leo has 19 pencils while Zoe has 5 pencils.

Between the two of them, how many pencils are there?

Subtracting within 50

WORKED EXAMPLE

$$12 - 8 = \underline{4}$$

7. Subtraction

Work out each difference.

- | | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 1 $34 - 30 = \underline{\quad}$ | 2 $43 - 34 = \underline{\quad}$ | 3 $35 - 4 = \underline{\quad}$ | 4 $49 - 26 = \underline{\quad}$ |
| 5 $38 - 1 = \underline{\quad}$ | 6 $48 - 12 = \underline{\quad}$ | 7 $46 - 44 = \underline{\quad}$ | 8 $37 - 16 = \underline{\quad}$ |
| 9 $44 - 36 = \underline{\quad}$ | 10 $49 - 14 = \underline{\quad}$ | 11 $31 - 2 = \underline{\quad}$ | 12 $48 - 7 = \underline{\quad}$ |
| 13 $47 - 11 = \underline{\quad}$ | 14 $44 - 32 = \underline{\quad}$ | 15 $41 - 22 = \underline{\quad}$ | 16 $47 - 45 = \underline{\quad}$ |
| 17 $31 - 15 = \underline{\quad}$ | 18 $46 - 6 = \underline{\quad}$ | 19 $48 - 32 = \underline{\quad}$ | 20 $31 - 7 = \underline{\quad}$ |
| 21 $44 - 19 = \underline{\quad}$ | 22 $46 - 8 = \underline{\quad}$ | 23 $50 - 35 = \underline{\quad}$ | 24 $38 - 21 = \underline{\quad}$ |
| 25 $43 - 8 = \underline{\quad}$ | 26 $49 - 3 = \underline{\quad}$ | 27 $35 - 3 = \underline{\quad}$ | 28 $48 - 10 = \underline{\quad}$ |

8. Word problems: subtracting

Read each problem. Write the answer.

- 29 Of the 21 cookies that Max and Zoe share, 12 are Max's.

How many cookies are Zoe's?

- 30 Max now has 19 apples after being given 6 more.

How many apples did Max have to begin with?

- 31 Ava had 17 apples. After eating some, Ava had 11 apples left.

How many apples did Ava eat?

WORKED EXAMPLE

$$31 + 4 = \underline{35}$$

9. Addition

Work out each sum.

- | | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 1 $11 + 57 = \underline{\quad}$ | 2 $16 + 79 = \underline{\quad}$ | 3 $23 + 50 = \underline{\quad}$ | 4 $69 + 11 = \underline{\quad}$ |
| 5 $7 + 46 = \underline{\quad}$ | 6 $94 + 2 = \underline{\quad}$ | 7 $69 + 19 = \underline{\quad}$ | 8 $28 + 27 = \underline{\quad}$ |
| 9 $69 + 24 = \underline{\quad}$ | 10 $36 + 34 = \underline{\quad}$ | 11 $52 + 31 = \underline{\quad}$ | 12 $59 + 14 = \underline{\quad}$ |
| 13 $23 + 71 = \underline{\quad}$ | 14 $17 + 50 = \underline{\quad}$ | 15 $73 + 26 = \underline{\quad}$ | 16 $66 + 15 = \underline{\quad}$ |
| 17 $31 + 51 = \underline{\quad}$ | 18 $8 + 83 = \underline{\quad}$ | 19 $66 + 16 = \underline{\quad}$ | 20 $47 + 21 = \underline{\quad}$ |
| 21 $56 + 27 = \underline{\quad}$ | 22 $28 + 48 = \underline{\quad}$ | | |

10. Missing numbers: adding

Write the missing number in each one.

- | | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 23 $53 + \underline{\quad} = 88$ | 24 $\underline{\quad} + 33 = 80$ | 25 $\underline{\quad} + 15 = 51$ | 26 $\underline{\quad} + 89 = 90$ |
| 27 $\underline{\quad} + 80 = 84$ | 28 $\underline{\quad} + 50 = 95$ | 29 $72 + \underline{\quad} = 81$ | 30 $11 + \underline{\quad} = 50$ |
| 31 $\underline{\quad} + 3 = 71$ | 32 $58 + \underline{\quad} = 99$ | 33 $16 + \underline{\quad} = 69$ | 34 $58 + \underline{\quad} = 77$ |
| 35 $\underline{\quad} + 47 = 76$ | | | |

11. Word problems: adding

Read each problem. Write the answer.

- 36 Ava has 13 pencils and Zoe has 9.

How many pencils do they have altogether?

- 37 With 6 apples gone, Leo was left with just 11 apples.

How many apples did Leo have before?

- 38 Ava has 12 cookies, and Nina has 6 more than Ava.

How many cookies does Nina have?

Subtracting within 100

WORKED EXAMPLE

$$64 - 33 = \underline{31}$$

12. Subtraction

Work out each difference.

1 $89 - 22 = \underline{\quad}$

2 $77 - 59 = \underline{\quad}$

3 $77 - 50 = \underline{\quad}$

4 $73 - 46 = \underline{\quad}$

5 $88 - 48 = \underline{\quad}$

6 $100 - 68 = \underline{\quad}$

7 $96 - 10 = \underline{\quad}$

8 $90 - 50 = \underline{\quad}$

9 $88 - 59 = \underline{\quad}$

10 $90 - 79 = \underline{\quad}$

11 $89 - 46 = \underline{\quad}$

12 $75 - 57 = \underline{\quad}$

13 $98 - 91 = \underline{\quad}$

14 $67 - 8 = \underline{\quad}$

15 $71 - 55 = \underline{\quad}$

16 $100 - 52 = \underline{\quad}$

17 $67 - 34 = \underline{\quad}$

18 $99 - 65 = \underline{\quad}$

19 $99 - 47 = \underline{\quad}$

20 $69 - 59 = \underline{\quad}$

21 $99 - 51 = \underline{\quad}$

22 $100 - 71 = \underline{\quad}$

23 $99 - 77 = \underline{\quad}$

24 $55 - 26 = \underline{\quad}$

25 $71 - 14 = \underline{\quad}$

26 $80 - 49 = \underline{\quad}$

27 $62 - 45 = \underline{\quad}$

28 $95 - 38 = \underline{\quad}$

13. Word problems: subtracting

Read each problem. Write the answer.

- 29 Leo has 18 stickers, while Max has 7.

How many more stickers does Leo have than Max?

- 30 Zoe has 8 more apples than Nina, and 18 apples in all.

How many apples does Nina have?

WORKED EXAMPLE

$$900 + 90 + 1 \rightarrow \underline{991}$$

14. Reading expanded form

Write the number each expanded form makes.

1 $700 + 1 \rightarrow \underline{\hspace{2cm}}$

3 $600 + 8 \rightarrow \underline{\hspace{2cm}}$

5 $600 + 2 \rightarrow \underline{\hspace{2cm}}$

7 $600 + 7 \rightarrow \underline{\hspace{2cm}}$

9 $600 + 5 \rightarrow \underline{\hspace{2cm}}$

11 $600 + 3 \rightarrow \underline{\hspace{2cm}}$

13 $600 + 1 \rightarrow \underline{\hspace{2cm}}$

15 $300 + 6 \rightarrow \underline{\hspace{2cm}}$

17 $300 + 9 \rightarrow \underline{\hspace{2cm}}$

19 $200 + 20 + 3 \rightarrow \underline{\hspace{2cm}}$

21 $200 + 4 \rightarrow \underline{\hspace{2cm}}$

23 $200 + 6 \rightarrow \underline{\hspace{2cm}}$

2 $100 + 80 + 5 \rightarrow \underline{\hspace{2cm}}$

4 $100 + 6 \rightarrow \underline{\hspace{2cm}}$

6 $700 + 30 + 9 \rightarrow \underline{\hspace{2cm}}$

8 $700 + 9 \rightarrow \underline{\hspace{2cm}}$

10 $300 + 1 \rightarrow \underline{\hspace{2cm}}$

12 $300 + 40 + 5 \rightarrow \underline{\hspace{2cm}}$

14 $800 + 4 \rightarrow \underline{\hspace{2cm}}$

16 $400 + 7 \rightarrow \underline{\hspace{2cm}}$

18 $800 + 8 \rightarrow \underline{\hspace{2cm}}$

20 $300 + 4 \rightarrow \underline{\hspace{2cm}}$

22 $800 + 6 \rightarrow \underline{\hspace{2cm}}$

24 $500 + 7 \rightarrow \underline{\hspace{2cm}}$

15. Subtraction

Work out each difference.

25 $25 - 6 = \underline{\hspace{2cm}}$

26 $41 - 3 = \underline{\hspace{2cm}}$

27 $42 - 30 = \underline{\hspace{2cm}}$

28 $35 - 19 = \underline{\hspace{2cm}}$

29 $34 - 15 = \underline{\hspace{2cm}}$

30 $50 - 49 = \underline{\hspace{2cm}}$

31 $35 - 27 = \underline{\hspace{2cm}}$

32 $24 - 9 = \underline{\hspace{2cm}}$

33 $47 - 42 = \underline{\hspace{2cm}}$

34 $45 - 28 = \underline{\hspace{2cm}}$

Column Addition

WORKED EXAMPLE

$$\begin{array}{r} \textcolor{red}{1} \text{ } \textcolor{red}{1} \\ 296 \\ + 505 \\ \hline \textcolor{red}{801} \end{array}$$

16. Add and subtract multi-digit numbers

Add. Work down the columns.

$$\begin{array}{r} 1 \quad 735 \\ + \quad 360 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \quad 703 \\ + \quad 748 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \quad 178 \\ + \quad 945 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \quad 550 \\ + \quad 978 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \quad 795 \\ + \quad 425 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \quad 755 \\ + \quad 853 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \quad 935 \\ + \quad 909 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \quad 206 \\ + \quad 792 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \quad 912 \\ + \quad 646 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \quad 745 \\ + \quad 931 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \quad 996 \\ + \quad 143 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \quad 976 \\ + \quad 486 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \quad 892 \\ + \quad 470 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \quad 272 \\ + \quad 740 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \quad 977 \\ + \quad 784 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \quad 568 \\ + \quad 812 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \quad 623 \\ + \quad 516 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \quad 370 \\ + \quad 970 \\ \hline \end{array}$$

$$\begin{array}{r} 19 \quad 904 \\ + \quad 736 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \quad 493 \\ + \quad 572 \\ \hline \end{array}$$

$$\begin{array}{r} 21 \quad 669 \\ + \quad 819 \\ \hline \end{array}$$

$$\begin{array}{r} 22 \quad 635 \\ + \quad 947 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \quad 827 \\ + \quad 844 \\ \hline \end{array}$$

17. Addition

Work out each sum.

24 $61 + 15 = \underline{\quad}$

25 $9 + 87 = \underline{\quad}$

26 $14 + 46 = \underline{\quad}$

27 $79 + 18 = \underline{\quad}$

28 $3 + 47 = \underline{\quad}$

29 $17 + 65 = \underline{\quad}$

30 $94 + 5 = \underline{\quad}$

31 $55 + 9 = \underline{\quad}$

32 $38 + 34 = \underline{\quad}$

33 $92 + 7 = \underline{\quad}$

Column Subtraction

WORKED EXAMPLE

$$\begin{array}{r} \text{4 11} \\ 251 \\ - 144 \\ \hline 107 \end{array}$$

18. Add and subtract multi-digit numbers

Subtract. Work down the columns.

$$\begin{array}{r} 1 \quad 827 \\ - 566 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \quad 850 \\ - 749 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \quad 736 \\ - 392 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \quad 989 \\ - 563 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \quad 679 \\ - 262 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \quad 859 \\ - 647 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \quad 855 \\ - 636 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \quad 717 \\ - 203 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \quad 920 \\ - 655 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \quad 995 \\ - 475 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \quad 688 \\ - 585 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \quad 906 \\ - 124 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \quad 832 \\ - 685 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \quad 742 \\ - 210 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \quad 828 \\ - 671 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \quad 990 \\ - 476 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \quad 814 \\ - 772 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \quad 995 \\ - 834 \\ \hline \end{array}$$

$$\begin{array}{r} 19 \quad 986 \\ - 117 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \quad 772 \\ - 302 \\ \hline \end{array}$$

$$\begin{array}{r} 21 \quad 916 \\ - 299 \\ \hline \end{array}$$

$$\begin{array}{r} 22 \quad 867 \\ - 744 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \quad 878 \\ - 631 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \quad 694 \\ - 276 \\ \hline \end{array}$$

19. Subtraction

Work out each difference.

$$25 \quad 77 - 70 = \underline{\quad}$$

$$26 \quad 100 - 92 = \underline{\quad}$$

$$27 \quad 85 - 40 = \underline{\quad}$$

$$28 \quad 95 - 10 = \underline{\quad}$$

$$29 \quad 87 - 21 = \underline{\quad}$$

$$30 \quad 73 - 7 = \underline{\quad}$$

$$31 \quad 80 - 12 = \underline{\quad}$$

$$32 \quad 88 - 67 = \underline{\quad}$$

$$33 \quad 81 - 22 = \underline{\quad}$$

$$34 \quad 85 - 16 = \underline{\quad}$$

WORKED EXAMPLE

2, 8, 14, 20, 26**20. Number patterns**

Find the missing number in each pattern.

- | | | |
|----------------------|----------------------|----------------------|
| 1 1, __, 17, 25, 33 | 2 4, 9, 14, __, 24 | 3 8, 15, __, 29, 36 |
| 4 6, __, 24, 33, 42 | 5 5, 14, __, 32, 41 | 6 1, 10, __, 28, 37 |
| 7 2, 7, __, 17, 22 | 8 6, 16, __, 36, 46 | 9 5, 8, 11, __, 17 |
| 10 7, 17, __, 37, 47 | 11 3, 13, __, 33, 43 | 12 4, 10, 16, __, 28 |
| 13 5, 9, __, 17, 21 | 14 6, 9, 12, __, 18 | 15 4, __, 18, 25, 32 |
| 16 1, 8, __, 22, 29 | 17 7, __, 21, 28, 35 | 18 9, __, 23, 30, 37 |
| 19 8, 17, __, 35, 44 | 20 5, 11, 17, __, 29 | 21 8, 15, 22, __, 36 |
| 22 9, 11, __, 15, 17 | 23 9, 16, 23, __, 37 | 24 6, __, 10, 12, 14 |
| 25 1, 3, 5, __, 9 | 26 5, 15, 25, __, 45 | 27 8, 17, 26, __, 44 |
| 28 1, 12, 23, __, 45 | 29 8, __, 30, 41, 52 | 30 8, 20, __, 44, 56 |
| 31 6, 9, __, 15, 18 | 32 1, 7, 13, __, 25 | 33 5, 11, __, 23, 29 |
| 34 8, 13, 18, __, 28 | 35 1, 5, __, 13, 17 | 36 2, 5, __, 11, 14 |
| 37 7, 10, 13, __, 19 | 38 1, __, 5, 7, 9 | 39 1, 13, __, 37, 49 |
| 40 3, 11, __, 27, 35 | 41 2, 8, 14, __, 26 | 42 7, 16, 25, __, 43 |
| 43 1, 6, 11, __, 21 | 44 4, 14, 24, __, 44 | 45 3, 9, 15, __, 27 |
| 46 4, __, 14, 19, 24 | 47 8, __, 28, 38, 48 | 48 2, __, 22, 32, 42 |
| 49 4, 6, 8, __, 12 | 50 9, 17, 25, __, 41 | |

21. Reading expanded form

Write the number each expanded form makes.

- | | |
|-------------------------------|------------------------------------|
| 51 $500 + 9 \rightarrow$ ____ | 52 $400 + 70 + 4 \rightarrow$ ____ |
| 53 $400 + 9 \rightarrow$ ____ | 54 $100 + 3 \rightarrow$ ____ |
| 55 $800 + 6 \rightarrow$ ____ | 56 $600 + 40 + 2 \rightarrow$ ____ |
| 57 $300 + 1 \rightarrow$ ____ | 58 $400 + 8 \rightarrow$ ____ |
| 59 $100 + 9 \rightarrow$ ____ | 60 $900 + 6 \rightarrow$ ____ |

WORKED EXAMPLE

The sum of two even numbers is even.

always

sometimes

never

Why? **ANSWER:** There is no counter-example — it holds every time.

22. Reasoning puzzles

Read each question and write what you work out.

- 1 Which number is the odd one out?

7

24

9

36

Why?

- 2 $\blacksquare + \blacksquare = 20$ and $\blacklozenge - \blacksquare = 18$. What is $\blacklozenge$?

Why?

- 3 Which number is the odd one out?

40

30

22

10

Why?

- 4 Mia wrote $8 \times 10 = 18$. Write the correct answer.

Why?

- 5 Which number is the odd one out?

10

19

15

30

Why?

- 6 $\bullet + \bullet = 4$ and $\blacklozenge - \bullet = 20$. What is $\blacklozenge$?

Why?

- 7 $\blacksquare + \blacksquare = 24$ and $\blacktriangle - \blacksquare = 14$. What is $\blacktriangle$?

Why?

Telling the Time

WORKED EXAMPLE

$$5:45 \rightarrow 6:45 = \underline{60} \text{ min}$$

23. Elapsed time

Write how many minutes pass between the two times.

1 $1:20 \rightarrow 2:10 = \underline{\hspace{1cm}}$
min

2 $8:15 \rightarrow 9:35 = \underline{\hspace{1cm}}$
min

3 $3:20 \rightarrow 4:15 = \underline{\hspace{1cm}}$
min

4 $7:40 \rightarrow 8:55 = \underline{\hspace{1cm}}$
min

5 $6:35 \rightarrow 7:00 = \underline{\hspace{1cm}}$
min

6 $7:55 \rightarrow 9:10 = \underline{\hspace{1cm}}$
min

7 $5:50 \rightarrow 7:05 = \underline{\hspace{1cm}}$
min

8 $11:35 \rightarrow 12:15 = \underline{\hspace{1cm}}$
min

9 $9:45 \rightarrow 11:05 = \underline{\hspace{1cm}}$
min

10 $2:35 \rightarrow 4:00 = \underline{\hspace{1cm}}$
min

11 $10:30 \rightarrow 11:10 = \underline{\hspace{1cm}}$
min

12 $7:45 \rightarrow 9:10 = \underline{\hspace{1cm}}$
min

13 $3:30 \rightarrow 4:55 = \underline{\hspace{1cm}}$
min

14 $8:15 \rightarrow 9:05 = \underline{\hspace{1cm}}$
min

15 $12:25 \rightarrow 1:50 = \underline{\hspace{1cm}}$
min

16 $10:40 \rightarrow 12:05 = \underline{\hspace{1cm}}$
min

17 $1:15 \rightarrow 2:00 = \underline{\hspace{1cm}}$
min

18 $1:45 \rightarrow 3:10 = \underline{\hspace{1cm}}$
min

19 $9:20 \rightarrow 10:25 = \underline{\hspace{1cm}}$
min

20 $1:25 \rightarrow 2:25 = \underline{\hspace{1cm}}$
min

21 $2:35 \rightarrow 4:05 = \underline{\hspace{1cm}}$
min

22 $4:55 \rightarrow 6:15 = \underline{\hspace{1cm}}$
min

23 $8:25 \rightarrow 9:45 = \underline{\hspace{1cm}}$
min

24 $12:25 \rightarrow 1:20 = \underline{\hspace{1cm}}$
min

25 $5:15 \rightarrow 6:20 = \underline{\hspace{1cm}}$
min

26 $2:30 \rightarrow 3:40 = \underline{\hspace{1cm}}$
min

24. Add and subtract multi-digit numbers

Subtract. Work down the columns.

$$\begin{array}{r} 27 \quad 811 \\ - 113 \\ \hline \end{array}$$

$$\begin{array}{r} 28 \quad 916 \\ - 202 \\ \hline \end{array}$$

$$\begin{array}{r} 29 \quad 773 \\ - 110 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \quad 831 \\ - 796 \\ \hline \end{array}$$

$$\begin{array}{r} 31 \quad 776 \\ - 578 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \quad 936 \\ - 196 \\ \hline \end{array}$$

$$\begin{array}{r} 33 \quad 908 \\ - 855 \\ \hline \end{array}$$

$$\begin{array}{r} 34 \quad 679 \\ - 348 \\ \hline \end{array}$$

Naming Shapes

WORKED EXAMPLE



rectangle

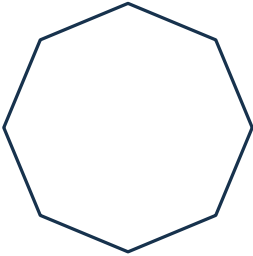
square

triangle

25. Name the shape

Circle the name of each shape.

1

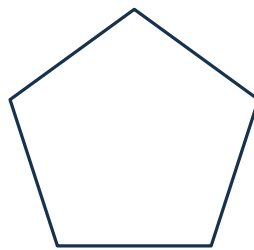


hexagon

octagon

square

2

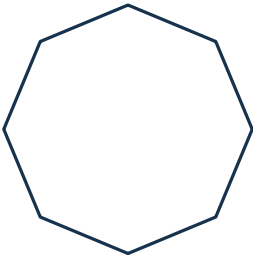


octagon

pentagon

square

3

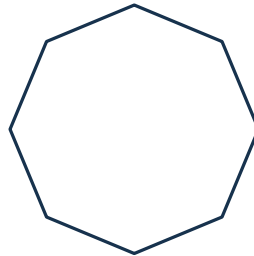


octagon

rectangle

triangle

4

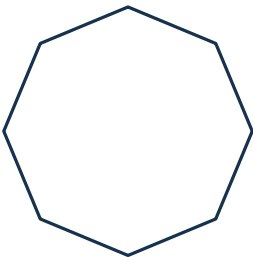


octagon

pentagon

triangle

5



octagon

pentagon

square

6



hexagon

pentagon

rectangle

26. Number patterns

Find the missing number in each pattern.

7 5, ____, 15, 20, 25

8 1, 9, 17, ____, 33

9 1, ____, 17, 25, 33

10 2, 9, ____, 23, 30

11 6, ____, 24, 33, 42

12 1, 10, ____, 28, 37

Equal Shares

WORKED EXAMPLE

$$= \frac{1}{4}$$

27. Name the fraction

Answer each question.



28. Subtraction

Work out each difference.

13 $89 - 22 = \underline{\quad}$

14 $92 - 50 = \underline{\quad}$

15 $89 - 9 = \underline{\quad}$

16 $95 - 34 = \underline{\quad}$

17 $50 - 28 = \underline{\quad}$

18 $95 - 7 = \underline{\quad}$

19 $72 - 3 = \underline{\quad}$

20 $76 - 44 = \underline{\quad}$

21 $81 - 77 = \underline{\quad}$

22 $91 - 84 = \underline{\quad}$

Picture Graphs and Bar Graphs

WORKED EXAMPLE

Our favorite sport

Football	••
Swimming	•
Running	••••••••8
Cycling	••••

How many more chose running than chose football?

Each ● stands for 1.

29. Picture graphs

Read each picture graph and answer the question.

Shells found on the beach

Monday	••••••••
Tuesday	••
Wednesday	••••
Thursday	•••••

Each ● stands for 1.

1 Which has the fewest?

2 How many altogether?

Stickers in each packet

Stars	••••••••
Hearts	•••••••
Moons	••••
Suns	•

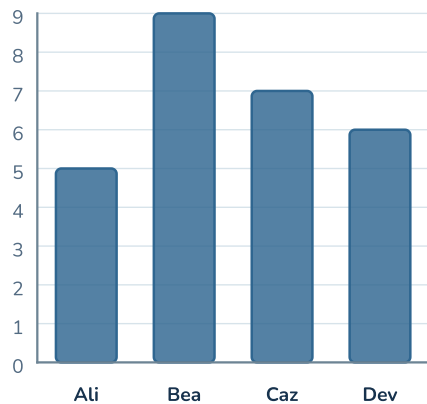
Each ● stands for 1.

3 How many fewer hearts than stars?

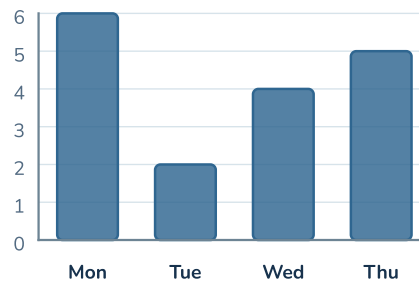
30. Bar graphs

Read each bar graph and answer the question.

Books read this term



Shells found on the beach



4 Which has the most?

5 Which has the fewest?

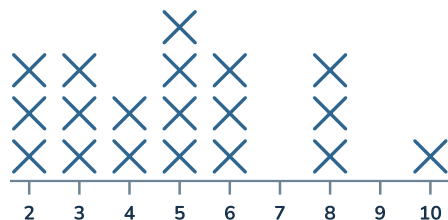
6 How many fewer on Tuesday than on Monday?

Line Plots

31. Line plots

Read each line plot and answer the question.

Length of worms we found (inches)

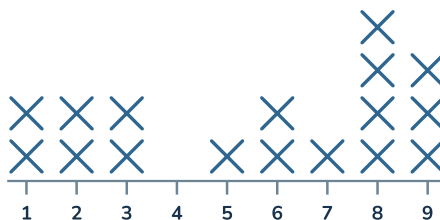


- 1 How many worms were longer than 3 inches?

- 2 How many worms were longer than 4 inches?

- 3 How many worms were longer than 5 inches?

Length of the feathers (inches)



- 4 How many feathers were measured altogether?

- 5 How many more feathers measured 2 inches than 5 inches?

- 6 How many more feathers measured 2 inches than 7 inches?

32. Elapsed time

Write how many minutes pass between the two times.

- 7 11:15 → 12:15 = _____
min

- 9 8:45 → 9:25 = _____
min

- 11 3:20 → 4:05 = _____
min

- 8 12:30 → 2:00 = _____
min

- 10 8:45 → 9:55 = _____
min

- 12 6:50 → 7:55 = _____
min

Word Problems

WORKED EXAMPLE

Maya already had 19 apples and was given 17 more.

How many apples does Maya have in all?

ANSWER: $19 + 17 = 36$ apples

33. Word problems: adding

Read each problem. Write the answer.

- 1 Max has 12 pencils. Zoe has 7 more.

How many pencils does Zoe have?

- 2 Compared to Zoe's 16 stickers, Leo has 13 more.

How many stickers does Leo have?

- 3 Between them, Nina has 18 apples and Max has 6.

How many apples do they have altogether?

- 4 Maya has 16 pencils. Max has 11 more.

How many pencils does Max have?

- 5 Between them, Maya has 14 pencils and Zoe has 9.

How many pencils do they have altogether?

- 6 With 8 apples gone, Leo was left with just 5 apples.

How many apples did Leo have before?

34. Reading expanded form

Write the number each expanded form makes.

7 $700 + 8 \rightarrow$ _____

9 $400 + 2 \rightarrow$ _____

11 $100 + 2 \rightarrow$ _____

8 $500 + 90 + 3 \rightarrow$ _____

10 $500 + 4 \rightarrow$ _____

12 $900 + 90 + 6 \rightarrow$ _____

Review: Facts within 20

WORKED EXAMPLE

$$3 + 7 = \underline{10}$$

35. Addition

Work out each sum.

- | | | | |
|---------------------------------|---------------------------------|---------------------------------|----------------------------------|
| 1 $6 + 7 = \underline{\quad}$ | 2 $11 + 9 = \underline{\quad}$ | 3 $11 + 4 = \underline{\quad}$ | 4 $2 + 17 = \underline{\quad}$ |
| 5 $14 + 2 = \underline{\quad}$ | 6 $6 + 8 = \underline{\quad}$ | 7 $9 + 9 = \underline{\quad}$ | 8 $9 + 3 = \underline{\quad}$ |
| 9 $17 + 3 = \underline{\quad}$ | 10 $11 + 8 = \underline{\quad}$ | 11 $2 + 8 = \underline{\quad}$ | 12 $10 + 10 = \underline{\quad}$ |
| 13 $18 + 1 = \underline{\quad}$ | 14 $5 + 10 = \underline{\quad}$ | 15 $8 + 7 = \underline{\quad}$ | 16 $7 + 9 = \underline{\quad}$ |
| 17 $5 + 5 = \underline{\quad}$ | 18 $3 + 15 = \underline{\quad}$ | 19 $16 + 4 = \underline{\quad}$ | 20 $1 + 15 = \underline{\quad}$ |
| 21 $0 + 19 = \underline{\quad}$ | 22 $9 + 6 = \underline{\quad}$ | 23 $12 + 7 = \underline{\quad}$ | 24 $1 + 14 = \underline{\quad}$ |

36. Subtraction

Work out each difference.

- | | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 25 $17 - 7 = \underline{\quad}$ | 26 $18 - 9 = \underline{\quad}$ | 27 $10 - 4 = \underline{\quad}$ | 28 $20 - 19 = \underline{\quad}$ |
| 29 $12 - 5 = \underline{\quad}$ | 30 $18 - 15 = \underline{\quad}$ | 31 $18 - 16 = \underline{\quad}$ | 32 $11 - 4 = \underline{\quad}$ |
| 33 $18 - 4 = \underline{\quad}$ | 34 $20 - 9 = \underline{\quad}$ | 35 $17 - 3 = \underline{\quad}$ | 36 $17 - 8 = \underline{\quad}$ |
| 37 $18 - 6 = \underline{\quad}$ | 38 $13 - 8 = \underline{\quad}$ | 39 $14 - 9 = \underline{\quad}$ | 40 $19 - 1 = \underline{\quad}$ |
| 41 $10 - 6 = \underline{\quad}$ | 42 $20 - 5 = \underline{\quad}$ | 43 $18 - 8 = \underline{\quad}$ | 44 $16 - 0 = \underline{\quad}$ |
| 45 $20 - 17 = \underline{\quad}$ | 46 $19 - 2 = \underline{\quad}$ | 47 $19 - 16 = \underline{\quad}$ | 48 $15 - 10 = \underline{\quad}$ |

37. Add and subtract multi-digit numbers

Subtract. Work down the columns.

- | | | | | | |
|--|--|--|--|--|--|
| 49 $\begin{array}{r} 790 \\ - 160 \\ \hline \end{array}$ | 50 $\begin{array}{r} 829 \\ - 295 \\ \hline \end{array}$ | 51 $\begin{array}{r} 743 \\ - 623 \\ \hline \end{array}$ | 52 $\begin{array}{r} 873 \\ - 383 \\ \hline \end{array}$ | 53 $\begin{array}{r} 684 \\ - 184 \\ \hline \end{array}$ | 54 $\begin{array}{r} 850 \\ - 749 \\ \hline \end{array}$ |
| 55 $\begin{array}{r} 980 \\ - 605 \\ \hline \end{array}$ | 56 $\begin{array}{r} 640 \\ - 423 \\ \hline \end{array}$ | | | | |

Review: Two-Digit Numbers

WORKED EXAMPLE

$$44 + 14 = \underline{58}$$

38. Addition

Work out each sum.

1 $33 + 29 = \underline{\quad}$

2 $57 + 35 = \underline{\quad}$

3 $48 + 40 = \underline{\quad}$

4 $18 + 56 = \underline{\quad}$

5 $12 + 56 = \underline{\quad}$

6 $0 + 92 = \underline{\quad}$

7 $91 + 5 = \underline{\quad}$

8 $12 + 72 = \underline{\quad}$

9 $64 + 27 = \underline{\quad}$

10 $9 + 69 = \underline{\quad}$

11 $10 + 81 = \underline{\quad}$

12 $29 + 62 = \underline{\quad}$

13 $37 + 34 = \underline{\quad}$

14 $58 + 7 = \underline{\quad}$

15 $14 + 82 = \underline{\quad}$

16 $9 + 84 = \underline{\quad}$

17 $47 + 13 = \underline{\quad}$

18 $67 + 25 = \underline{\quad}$

19 $52 + 48 = \underline{\quad}$

20 $41 + 46 = \underline{\quad}$

21 $8 + 85 = \underline{\quad}$

22 $32 + 68 = \underline{\quad}$

23 $79 + 18 = \underline{\quad}$

24 $78 + 11 = \underline{\quad}$

25 $87 + 12 = \underline{\quad}$

26 $67 + 31 = \underline{\quad}$

27 $63 + 4 = \underline{\quad}$

39. Subtraction

Work out each difference.

28 $77 - 61 = \underline{\quad}$

29 $96 - 21 = \underline{\quad}$

30 $84 - 32 = \underline{\quad}$

31 $93 - 57 = \underline{\quad}$

32 $78 - 34 = \underline{\quad}$

33 $100 - 19 = \underline{\quad}$

34 $93 - 63 = \underline{\quad}$

35 $52 - 48 = \underline{\quad}$

36 $98 - 76 = \underline{\quad}$

37 $100 - 55 = \underline{\quad}$

38 $81 - 21 = \underline{\quad}$

39 $95 - 74 = \underline{\quad}$

40 $90 - 89 = \underline{\quad}$

41 $78 - 72 = \underline{\quad}$

42 $95 - 5 = \underline{\quad}$

43 $70 - 17 = \underline{\quad}$

44 $61 - 47 = \underline{\quad}$

45 $97 - 27 = \underline{\quad}$

46 $93 - 68 = \underline{\quad}$

47 $77 - 6 = \underline{\quad}$

48 $96 - 27 = \underline{\quad}$

49 $100 - 0 = \underline{\quad}$

50 $91 - 48 = \underline{\quad}$

51 $89 - 54 = \underline{\quad}$

52 $88 - 69 = \underline{\quad}$

53 $93 - 92 = \underline{\quad}$

54 $50 - 45 = \underline{\quad}$

40. Number patterns

Find the missing number in each pattern.

55 5, 13, 21, , 37

56 1, 10, , 28, 37

57 8, 10, , 14, 16

58 9, , 33, 45, 57

59 6, 13, , 27, 34

60 3, 6, 9, , 15

40. Number patterns (continued)

Find the missing number in each pattern.

61 7, __, 17, 22, 27

62 4, __, 10, 13, 16

63 2, 4, 6, __, 10

64 6, 9, 12, __, 18

Answer Key (1 of 9)

Adding within 20

Addition

1. $6 + 11 = 17$
2. $0 + 20 = 20$
3. $9 + 1 = 10$
4. $9 + 9 = 18$
5. $3 + 13 = 16$
6. $0 + 19 = 19$
7. $3 + 16 = 19$
8. $13 + 4 = 17$
9. $13 + 7 = 20$
10. $15 + 5 = 20$
11. $1 + 16 = 17$
12. $7 + 12 = 19$
13. $12 + 7 = 19$
14. $3 + 14 = 17$
15. $2 + 18 = 20$
16. $14 + 6 = 20$
17. $16 + 0 = 16$
18. $4 + 14 = 18$
19. $7 + 11 = 18$
20. $2 + 9 = 11$
21. $17 + 2 = 19$
22. $18 + 0 = 18$
23. $10 + 8 = 18$
24. $1 + 15 = 16$
25. $7 + 9 = 16$
26. $1 + 17 = 18$
27. $5 + 12 = 17$
28. $3 + 17 = 20$
29. $4 + 15 = 19$

Word problems: adding

30. $6 + 4 = 10$ apples
31. $9 + 6 = 15$ pencils
32. $11 + 7 = 18$ cookies

Subtracting within 20

Subtraction

1. $15 - 11 = 4$
2. $18 - 6 = 12$
3. $17 - 17 = 0$
4. $18 - 8 = 10$
5. $15 - 13 = 2$

Subtracting within 20 (continued)

Subtraction (continued)

6. $20 - 8 = 12$
7. $18 - 4 = 14$
8. $16 - 5 = 11$
9. $18 - 9 = 9$
10. $18 - 11 = 7$
11. $11 - 3 = 8$
12. $20 - 1 = 19$
13. $19 - 14 = 5$
14. $17 - 12 = 5$
15. $19 - 12 = 7$
16. $14 - 7 = 7$
17. $16 - 12 = 4$
18. $17 - 9 = 8$
19. $20 - 2 = 18$
20. $13 - 9 = 4$
21. $18 - 7 = 11$
22. $20 - 16 = 4$
23. $18 - 17 = 1$
24. $12 - 3 = 9$
25. $15 - 6 = 9$
26. $20 - 14 = 6$
27. $15 - 12 = 3$
28. $19 - 19 = 0$
29. $18 - 14 = 4$
30. $13 - 8 = 5$
31. $20 - 6 = 14$
32. $19 - 7 = 12$
33. $15 - 3 = 12$

Word problems: subtracting

34. $12 - 8 = 4$ stickers
35. $19 - 12 = 7$ apples
36. $8 - 5 = 3$ cookies

Adding within 50

Addition

1. $13 + 25 = 38$
2. $35 + 13 = 48$
3. $3 + 34 = 37$
4. $32 + 18 = 50$
5. $21 + 23 = 44$
6. $17 + 25 = 42$

Answer Key (2 of 9)

Adding within 50 (continued)

Addition (continued)

7. $14 + 32 = 46$
8. $15 + 22 = 37$
9. $23 + 25 = 48$
10. $29 + 20 = 49$
11. $16 + 14 = 30$
12. $12 + 35 = 47$
13. $8 + 29 = 37$
14. $6 + 27 = 33$
15. $8 + 33 = 41$
16. $28 + 19 = 47$
17. $26 + 6 = 32$
18. $32 + 9 = 41$
19. $29 + 18 = 47$
20. $18 + 6 = 24$
21. $13 + 28 = 41$
22. $45 + 2 = 47$
23. $46 + 3 = 49$
24. $15 + 23 = 38$
25. $5 + 37 = 42$
26. $30 + 17 = 47$
27. $3 + 31 = 34$
28. $16 + 31 = 47$

Word problems: adding

29. $20 + 11 = 31$ stickers
30. $12 + 4 = 16$ apples
31. $19 + 5 = 24$ pencils

Subtracting within 50

Subtraction

1. $34 - 30 = 4$
2. $43 - 34 = 9$
3. $35 - 4 = 31$
4. $49 - 26 = 23$
5. $38 - 1 = 37$
6. $48 - 12 = 36$
7. $46 - 44 = 2$
8. $37 - 16 = 21$
9. $44 - 36 = 8$
10. $49 - 14 = 35$
11. $31 - 2 = 29$
12. $48 - 7 = 41$

Subtracting within 50 (continued)

Subtraction (continued)

13. $47 - 11 = 36$
14. $44 - 32 = 12$
15. $41 - 22 = 19$
16. $47 - 45 = 2$
17. $31 - 15 = 16$
18. $46 - 6 = 40$
19. $48 - 32 = 16$
20. $31 - 7 = 24$
21. $44 - 19 = 25$
22. $46 - 8 = 38$
23. $50 - 35 = 15$
24. $38 - 21 = 17$
25. $43 - 8 = 35$
26. $49 - 3 = 46$
27. $35 - 3 = 32$
28. $48 - 10 = 38$

Word problems: subtracting

29. $21 - 12 = 9$ cookies
30. $19 - 6 = 13$ apples
31. $17 - 11 = 6$ apples

Adding within 100

Addition

1. $11 + 57 = 68$
2. $16 + 79 = 95$
3. $23 + 50 = 73$
4. $69 + 11 = 80$
5. $7 + 46 = 53$
6. $94 + 2 = 96$
7. $69 + 19 = 88$
8. $28 + 27 = 55$
9. $69 + 24 = 93$
10. $36 + 34 = 70$
11. $52 + 31 = 83$
12. $59 + 14 = 73$
13. $23 + 71 = 94$
14. $17 + 50 = 67$
15. $73 + 26 = 99$
16. $66 + 15 = 81$
17. $31 + 51 = 82$
18. $8 + 83 = 91$

Answer Key (3 of 9)

Adding within 100 (continued)

Addition (continued)

- 19. $66 + 16 = 82$
- 20. $47 + 21 = 68$
- 21. $56 + 27 = 83$
- 22. $28 + 48 = 76$

Missing numbers: adding

- 23. $53 + 35 = 88$
- 24. $47 + 33 = 80$
- 25. $36 + 15 = 51$
- 26. $1 + 89 = 90$
- 27. $4 + 80 = 84$
- 28. $45 + 50 = 95$
- 29. $72 + 9 = 81$
- 30. $11 + 39 = 50$
- 31. $68 + 3 = 71$
- 32. $58 + 41 = 99$
- 33. $16 + 53 = 69$
- 34. $58 + 19 = 77$
- 35. $29 + 47 = 76$

Word problems: adding

- 36. $13 + 9 = 22$ pencils
- 37. $11 + 6 = 17$ apples
- 38. $12 + 6 = 18$ cookies

Subtracting within 100

Subtraction

- 1. $89 - 22 = 67$
- 2. $77 - 59 = 18$
- 3. $77 - 50 = 27$
- 4. $73 - 46 = 27$
- 5. $88 - 48 = 40$
- 6. $100 - 68 = 32$
- 7. $96 - 10 = 86$
- 8. $90 - 50 = 40$
- 9. $88 - 59 = 29$
- 10. $90 - 79 = 11$
- 11. $89 - 46 = 43$
- 12. $75 - 57 = 18$
- 13. $98 - 91 = 7$
- 14. $67 - 8 = 59$
- 15. $71 - 55 = 16$
- 16. $100 - 52 = 48$

Subtracting within 100 (continued)

Subtraction (continued)

- 17. $67 - 34 = 33$
- 18. $99 - 65 = 34$
- 19. $99 - 47 = 52$
- 20. $69 - 59 = 10$
- 21. $99 - 51 = 48$
- 22. $100 - 71 = 29$
- 23. $99 - 77 = 22$
- 24. $55 - 26 = 29$
- 25. $71 - 14 = 57$
- 26. $80 - 49 = 31$
- 27. $62 - 45 = 17$
- 28. $95 - 38 = 57$

Word problems: subtracting

- 29. $18 - 7 = 11$ stickers
- 30. $18 - 8 = 10$ apples

Hundreds, Tens and Ones

Reading expanded form

- 1. $700 + 1 = 701$
- 2. $100 + 80 + 5 = 185$
- 3. $600 + 8 = 608$
- 4. $100 + 6 = 106$
- 5. $600 + 2 = 602$
- 6. $700 + 30 + 9 = 739$
- 7. $600 + 7 = 607$
- 8. $700 + 9 = 709$
- 9. $600 + 5 = 605$
- 10. $300 + 1 = 301$
- 11. $600 + 3 = 603$
- 12. $300 + 40 + 5 = 345$
- 13. $600 + 1 = 601$
- 14. $800 + 4 = 804$
- 15. $300 + 6 = 306$
- 16. $400 + 7 = 407$
- 17. $300 + 9 = 309$
- 18. $800 + 8 = 808$
- 19. $200 + 20 + 3 = 223$
- 20. $300 + 4 = 304$
- 21. $200 + 4 = 204$
- 22. $800 + 6 = 806$
- 23. $200 + 6 = 206$

Answer Key (4 of 9)

Hundreds, Tens and Ones (continued)

Reading expanded form (continued)

24. $500 + 7 = 507$

Subtraction

25. $25 - 6 = 19$

26. $41 - 3 = 38$

27. $42 - 30 = 12$

28. $35 - 19 = 16$

29. $34 - 15 = 19$

30. $50 - 49 = 1$

31. $35 - 27 = 8$

32. $24 - 9 = 15$

33. $47 - 42 = 5$

34. $45 - 28 = 17$

Column Addition

Add and subtract multi-digit numbers

1. $735 + 360 = 1095$

2. $703 + 748 = 1451$

3. $178 + 945 = 1123$

4. $550 + 978 = 1528$

5. $795 + 425 = 1220$

6. $755 + 853 = 1608$

7. $935 + 909 = 1844$

8. $206 + 792 = 998$

9. $912 + 646 = 1558$

10. $745 + 931 = 1676$

11. $996 + 143 = 1139$

12. $976 + 486 = 1462$

13. $892 + 470 = 1362$

14. $272 + 740 = 1012$

15. $977 + 784 = 1761$

16. $568 + 812 = 1380$

17. $623 + 516 = 1139$

18. $370 + 970 = 1340$

19. $904 + 736 = 1640$

20. $493 + 572 = 1065$

21. $669 + 819 = 1488$

22. $635 + 947 = 1582$

23. $827 + 844 = 1671$

Addition

24. $61 + 15 = 76$

25. $9 + 87 = 96$

Column Addition (continued)

Addition (continued)

26. $14 + 46 = 60$

27. $79 + 18 = 97$

28. $3 + 47 = 50$

29. $17 + 65 = 82$

30. $94 + 5 = 99$

31. $55 + 9 = 64$

32. $38 + 34 = 72$

33. $92 + 7 = 99$

Column Subtraction

Add and subtract multi-digit numbers

1. $827 - 566 = 261$

2. $850 - 749 = 101$

3. $736 - 392 = 344$

4. $989 - 563 = 426$

5. $679 - 262 = 417$

6. $859 - 647 = 212$

7. $855 - 636 = 219$

8. $717 - 203 = 514$

9. $920 - 655 = 265$

10. $995 - 475 = 520$

11. $688 - 585 = 103$

12. $906 - 124 = 782$

13. $832 - 685 = 147$

14. $742 - 210 = 532$

15. $828 - 671 = 157$

16. $990 - 476 = 514$

17. $814 - 772 = 42$

18. $995 - 834 = 161$

19. $986 - 117 = 869$

20. $772 - 302 = 470$

21. $916 - 299 = 617$

22. $867 - 744 = 123$

23. $878 - 631 = 247$

24. $694 - 276 = 418$

Subtraction

25. $77 - 70 = 7$

26. $100 - 92 = 8$

27. $85 - 40 = 45$

28. $95 - 10 = 85$

29. $87 - 21 = 66$

Answer Key (5 of 9)

Column Subtraction (continued)

Subtraction (continued)

- 30. $73 - 7 = 66$
- 31. $80 - 12 = 68$
- 32. $88 - 67 = 21$
- 33. $81 - 22 = 59$
- 34. $85 - 16 = 69$

Number Patterns

Number patterns

- 1. 1, [9], 17, 25, 33
- 2. 4, 9, 14, [19], 24
- 3. 8, 15, [22], 29, 36
- 4. 6, [15], 24, 33, 42
- 5. 5, 14, [23], 32, 41
- 6. 1, 10, [19], 28, 37
- 7. 2, 7, [12], 17, 22
- 8. 6, 16, [26], 36, 46
- 9. 5, 8, 11, [14], 17
- 10. 7, 17, [27], 37, 47
- 11. 3, 13, [23], 33, 43
- 12. 4, 10, 16, [22], 28
- 13. 5, 9, [13], 17, 21
- 14. 6, 9, 12, [15], 18
- 15. 4, [11], 18, 25, 32
- 16. 1, 8, [15], 22, 29
- 17. 7, [14], 21, 28, 35
- 18. 9, [16], 23, 30, 37
- 19. 8, 17, [26], 35, 44
- 20. 5, 11, 17, [23], 29
- 21. 8, 15, 22, [29], 36
- 22. 9, 11, [13], 15, 17
- 23. 9, 16, 23, [30], 37
- 24. 6, [8], 10, 12, 14
- 25. 1, 3, 5, [7], 9
- 26. 5, 15, 25, [35], 45
- 27. 8, 17, 26, [35], 44
- 28. 1, 12, 23, [34], 45
- 29. 8, [19], 30, 41, 52
- 30. 8, 20, [32], 44, 56
- 31. 6, 9, [12], 15, 18
- 32. 1, 7, 13, [19], 25
- 33. 5, 11, [17], 23, 29

Number Patterns (continued)

Number patterns (continued)

- 34. 8, 13, 18, [23], 28
- 35. 1, 5, [9], 13, 17
- 36. 2, 5, [8], 11, 14
- 37. 7, 10, 13, [16], 19
- 38. 1, [3], 5, 7, 9
- 39. 1, 13, [25], 37, 49
- 40. 3, 11, [19], 27, 35
- 41. 2, 8, 14, [20], 26
- 42. 7, 16, 25, [34], 43
- 43. 1, 6, 11, [16], 21
- 44. 4, 14, 24, [34], 44
- 45. 3, 9, 15, [21], 27
- 46. 4, [9], 14, 19, 24
- 47. 8, [18], 28, 38, 48
- 48. 2, [12], 22, 32, 42
- 49. 4, 6, 8, [10], 12
- 50. 9, 17, 25, [33], 41

Reading expanded form

- 51. $500 + 9 = 509$
- 52. $400 + 70 + 4 = 474$
- 53. $400 + 9 = 409$
- 54. $100 + 3 = 103$
- 55. $800 + 6 = 806$
- 56. $600 + 40 + 2 = 642$
- 57. $300 + 1 = 301$
- 58. $400 + 8 = 408$
- 59. $100 + 9 = 109$
- 60. $900 + 6 = 906$

True, False or Fix It

Reasoning puzzles

- 1. 7, 24, 9, 36 $\rightarrow$ 7 (the other three are all multiples of 3)
- 2. $\blacksquare = 10$, $\blacklozenge = 28$
- 3. 40, 30, 22, 10 $\rightarrow$ 22 (the other three are all multiples of 10)
- 4. $8 \times 10 = 80$, not 18 (the numbers were added instead of multiplied)
- 5. 10, 19, 15, 30 $\rightarrow$ 19 (the other three are all multiples of 5)
- 6. $\bullet = 2$, $\blacklozenge = 22$

Answer Key (6 of 9)

True, False or Fix It (continued)

Reasoning puzzles (continued)

7. ■ = 12, ▲ = 26

Telling the Time

Elapsed time

1. 1:20 → 2:10 = 50 min
2. 8:15 → 9:35 = 80 min
3. 3:20 → 4:15 = 55 min
4. 7:40 → 8:55 = 75 min
5. 6:35 → 7:00 = 25 min
6. 7:55 → 9:10 = 75 min
7. 5:50 → 7:05 = 75 min
8. 11:35 → 12:15 = 40 min
9. 9:45 → 11:05 = 80 min
10. 2:35 → 4:00 = 85 min
11. 10:30 → 11:10 = 40 min
12. 7:45 → 9:10 = 85 min
13. 3:30 → 4:55 = 85 min
14. 8:15 → 9:05 = 50 min
15. 12:25 → 1:50 = 85 min
16. 10:40 → 12:05 = 85 min
17. 1:15 → 2:00 = 45 min
18. 1:45 → 3:10 = 85 min
19. 9:20 → 10:25 = 65 min
20. 1:25 → 2:25 = 60 min
21. 2:35 → 4:05 = 90 min
22. 4:55 → 6:15 = 80 min
23. 8:25 → 9:45 = 80 min
24. 12:25 → 1:20 = 55 min
25. 5:15 → 6:20 = 65 min
26. 2:30 → 3:40 = 70 min

Add and subtract multi-digit numbers

27. $811 - 113 = 698$
28. $916 - 202 = 714$
29. $773 - 110 = 663$
30. $831 - 796 = 35$
31. $776 - 578 = 198$
32. $936 - 196 = 740$
33. $908 - 855 = 53$
34. $679 - 348 = 331$

Naming Shapes

Name the shape

1. octagon — from hexagon, octagon, square
2. pentagon — from octagon, pentagon, square
3. octagon — from octagon, rectangle, triangle
4. octagon — from octagon, pentagon, triangle
5. octagon — from octagon, pentagon, square
6. rectangle — from hexagon, pentagon, rectangle

Number patterns

7. 5, [10], 15, 20, 25
8. 1, 9, 17, [25], 33
9. 1, [9], 17, 25, 33
10. 2, 9, [16], 23, 30
11. 6, [15], 24, 33, 42
12. 1, 10, [19], 28, 37

Equal Shares

Name the fraction

1. $\frac{1}{5}$
2. $\frac{3}{6}$
3. $\frac{1}{2}$
4. $\frac{3}{5}$
5. $\frac{5}{6}$
6. $\frac{1}{6}$
7. $\frac{1}{3}$
8. $\frac{2}{6}$
9. $\frac{5}{6}$
10. $\frac{2}{4}$
11. $\frac{5}{6}$
12. $\frac{4}{6}$

Subtraction

13. $89 - 22 = 67$
14. $92 - 50 = 42$
15. $89 - 9 = 80$
16. $95 - 34 = 61$
17. $50 - 28 = 22$
18. $95 - 7 = 88$
19. $72 - 3 = 69$
20. $76 - 44 = 32$
21. $81 - 77 = 4$
22. $91 - 84 = 7$

Answer Key (7 of 9)

Picture Graphs and Bar Graphs

Picture graphs

1. Tuesday (2)
2. $9 + 2 + 4 + 5 = 20$
3. Hearts is $8 - 7 = 1$ fewer than Stars

Bar graphs

4. Bea (9)
5. Ali (5)
6. Tuesday is $6 - 2 = 4$ fewer than Monday

Line Plots

Line plots

1. longer than 3 inches — 13 worms
2. longer than 4 inches — 11 worms
3. longer than 5 inches — 7 worms
4. $2 + 2 + 2 + 1 + 2 + 1 + 4 + 3 = 17$
5. 2 at 2 inches, 1 at 5 inches: $2 - 1 = 1$
6. 2 at 2 inches, 1 at 7 inches: $2 - 1 = 1$

Elapsed time

7. $11:15 \rightarrow 12:15 = 60$ min
8. $12:30 \rightarrow 2:00 = 90$ min
9. $8:45 \rightarrow 9:25 = 40$ min
10. $8:45 \rightarrow 9:55 = 70$ min
11. $3:20 \rightarrow 4:05 = 45$ min
12. $6:50 \rightarrow 7:55 = 65$ min

Word Problems

Word problems: adding

1. $12 + 7 = 19$ pencils
2. $16 + 13 = 29$ stickers
3. $18 + 6 = 24$ apples
4. $16 + 11 = 27$ pencils
5. $14 + 9 = 23$ pencils
6. $5 + 8 = 13$ apples

Reading expanded form

7. $700 + 8 = 708$
8. $500 + 90 + 3 = 593$
9. $400 + 2 = 402$
10. $500 + 4 = 504$
11. $100 + 2 = 102$
12. $900 + 90 + 6 = 996$

Review: Facts within 20

Addition

1. $6 + 7 = 13$
2. $11 + 9 = 20$
3. $11 + 4 = 15$
4. $2 + 17 = 19$
5. $14 + 2 = 16$
6. $6 + 8 = 14$
7. $9 + 9 = 18$
8. $9 + 3 = 12$
9. $17 + 3 = 20$
10. $11 + 8 = 19$
11. $2 + 8 = 10$
12. $10 + 10 = 20$
13. $18 + 1 = 19$
14. $5 + 10 = 15$
15. $8 + 7 = 15$
16. $7 + 9 = 16$
17. $5 + 5 = 10$
18. $3 + 15 = 18$
19. $16 + 4 = 20$
20. $1 + 15 = 16$
21. $0 + 19 = 19$
22. $9 + 6 = 15$
23. $12 + 7 = 19$
24. $1 + 14 = 15$

Subtraction

25. $17 - 7 = 10$
26. $18 - 9 = 9$
27. $10 - 4 = 6$
28. $20 - 19 = 1$
29. $12 - 5 = 7$
30. $18 - 15 = 3$
31. $18 - 16 = 2$
32. $11 - 4 = 7$
33. $18 - 4 = 14$
34. $20 - 9 = 11$
35. $17 - 3 = 14$
36. $17 - 8 = 9$
37. $18 - 6 = 12$
38. $13 - 8 = 5$
39. $14 - 9 = 5$
40. $19 - 1 = 18$

Answer Key (8 of 9)

Review: Facts within 20 (continued)

Subtraction (continued)

41. $10 - 6 = 4$
42. $20 - 5 = 15$
43. $18 - 8 = 10$
44. $16 - 0 = 16$
45. $20 - 17 = 3$
46. $19 - 2 = 17$
47. $19 - 16 = 3$
48. $15 - 10 = 5$

Add and subtract multi-digit numbers

49. $790 - 160 = 630$
50. $829 - 295 = 534$
51. $743 - 623 = 120$
52. $873 - 383 = 490$
53. $684 - 184 = 500$
54. $850 - 749 = 101$
55. $980 - 605 = 375$
56. $640 - 423 = 217$

Review: Two-Digit Numbers

Addition

1. $33 + 29 = 62$
2. $57 + 35 = 92$
3. $48 + 40 = 88$
4. $18 + 56 = 74$
5. $12 + 56 = 68$
6. $0 + 92 = 92$
7. $91 + 5 = 96$
8. $12 + 72 = 84$
9. $64 + 27 = 91$
10. $9 + 69 = 78$
11. $10 + 81 = 91$
12. $29 + 62 = 91$
13. $37 + 34 = 71$
14. $58 + 7 = 65$
15. $14 + 82 = 96$
16. $9 + 84 = 93$
17. $47 + 13 = 60$
18. $67 + 25 = 92$
19. $52 + 48 = 100$
20. $41 + 46 = 87$
21. $8 + 85 = 93$

Review: Two-Digit Numbers (continued)

Addition (continued)

22. $32 + 68 = 100$
23. $79 + 18 = 97$
24. $78 + 11 = 89$
25. $87 + 12 = 99$
26. $67 + 31 = 98$
27. $63 + 4 = 67$

Subtraction

28. $77 - 61 = 16$
29. $96 - 21 = 75$
30. $84 - 32 = 52$
31. $93 - 57 = 36$
32. $78 - 34 = 44$
33. $100 - 19 = 81$
34. $93 - 63 = 30$
35. $52 - 48 = 4$
36. $98 - 76 = 22$
37. $100 - 55 = 45$
38. $81 - 21 = 60$
39. $95 - 74 = 21$
40. $90 - 89 = 1$
41. $78 - 72 = 6$
42. $95 - 5 = 90$
43. $70 - 17 = 53$
44. $61 - 47 = 14$
45. $97 - 27 = 70$
46. $93 - 68 = 25$
47. $77 - 6 = 71$
48. $96 - 27 = 69$
49. $100 - 0 = 100$
50. $91 - 48 = 43$
51. $89 - 54 = 35$
52. $88 - 69 = 19$
53. $93 - 92 = 1$
54. $50 - 45 = 5$

Number patterns

55. 5, 13, 21, [29], 37
56. 1, 10, [19], 28, 37
57. 8, 10, [12], 14, 16
58. 9, [21], 33, 45, 57
59. 6, 13, [20], 27, 34

Answer Key (9 of 9)

Review: Two-Digit Numbers (continued)

Number patterns (continued)

60. 3, 6, 9, [12], 15

61. 7, [12], 17, 22, 27

62. 4, [7], 10, 13, 16

63. 2, 4, 6, [8], 10

64. 6, 9, 12, [15], 18

Solutions (1 of 14)

Adding within 20

Word problems: adding

30. Nina has 6 apples. Leo has 4.

How many apples do they have in all? ____

asked:

How many apples do they have in all?

$$6 + 4 = 10$$

10 apples

Read it through once and do NOTHING.

Grabbing the numbers on the first read means choosing an operation before you know the story, and that choice is the only hard part of a word problem.

Now the numbers: 6 and 4. Finding them is not the same as knowing what to do with them — that comes next, and it comes from the story rather than from the numbers.

You are told both parts and asked for the whole — so they join together. So this one is an addition: $6 + 4$.

$6 + 4 = 10$ apples. And answer the question that was ASKED — "How many apples do they have in all?" — in apples, because the sum on its own is not yet an answer.

Solutions (2 of 14)

Adding within 20 (continued)

Word problems: adding (continued)

31. Maya and Zoe have some pencils. Maya has 9 and Zoe has 6.

How many pencils do the two of them have in total? ____

asked:

How many pencils do the two of them
have in total?

$$9 + 6 = 15$$

15 pencils

Read it through once and do NOTHING.

Grabbing the numbers on the first read means choosing an operation before you know the story, and that choice is the only hard part of a word problem.

Now the numbers: 9 and 6. Finding them is not the same as knowing what to do with them — that comes next, and it comes from the story rather than from the numbers.

You are told both parts and asked for the whole — so they join together. So this one is an addition: $9 + 6$.

$9 + 6 = 15$ pencils. And answer the question that was ASKED — "How many pencils do the two of them have in total?" — in pencils, because the sum on its own is not yet an answer.

Hundreds, Tens and Ones

Reading expanded form

1. $700 + 1 \rightarrow$ ____

$$700 + 1 = \mathbf{701}$$

This is expanded form run backwards: each piece already says which column it belongs in, so nothing needs working out — only placing.

Put each one in its own column and the number falls out: 701.

Solutions (3 of 14)

Hundreds, Tens and Ones (continued)

Reading expanded form (continued)

2. $100 + 80 + 5 \rightarrow \underline{\hspace{2cm}}$

$$100 + 80 + 5 = 185$$

This is expanded form run backwards: each piece already says which column it belongs in, so nothing needs working out — only placing.

Put each one in its own column and the number falls out: 185.

Column Addition

Add and subtract multi-digit numbers

1.

$$\begin{array}{r} 1 \\ 735 \\ + 360 \\ \hline 1095 \end{array}$$

735 + 360, written in columns. Start at the RIGHT, with the ones.

5 plus 0 makes 5. Write 5 in the ones.

3 plus 6 makes 9. Write 9 in the tens.

7 plus 3 makes 10. That is more than 9, so write 0 in the hundreds and carry 1 to the left.

Nothing is left to add in the thousands, but a 1 was carried in — so the thousands is 1.

That is the whole sum: $735 + 360 = 1095$.

2.

$$\begin{array}{r} 1 \quad 1 \\ 703 \\ + 748 \\ \hline 1451 \end{array}$$

703 + 748, written in columns. Start at the RIGHT, with the ones.

3 plus 8 makes 11. That is more than 9, so write 1 in the ones and carry 1 to the left.

Add the carried 1 as well: $1 + 0 + 4$ makes 5. Write 5 in the tens.

7 plus 7 makes 14. That is more than 9, so write 4 in the hundreds and carry 1 to the left.

Nothing is left to add in the thousands, but a 1 was carried in — so the thousands is 1.

That is the whole sum: $703 + 748 = 1451$.

Solutions (4 of 14)

Number Patterns

Number patterns

1. 1, ____, 17, 25, 33

1 9 17 25 33

Find the rule first, from two numbers you can actually see — never from the gap.

17 to 25 is + 8. One pair is a guess, though — check it against another.

$25 + 8 = 33$, so the rule holds. Two pairs agreeing is what turns a guess into the rule.

Now apply it to the gap: $1 + 8 = 9$.

Check it against the number already after the gap: $9 + 8 = 17$, which is what is there. The missing number is 9.

2. 4, 9, 14, ____, 24

4 9 14 19 24

Find the rule first, from two numbers you can actually see — never from the gap.

4 to 9 is + 5. One pair is a guess, though — check it against another.

$9 + 5 = 14$, so the rule holds. Two pairs agreeing is what turns a guess into the rule.

Now apply it to the gap: $14 + 5 = 19$.

Check it against the number already after the gap: $19 + 5 = 24$, which is what is there. The missing number is 19.

Solutions (5 of 14)

True, False or Fix It

Reasoning puzzles

1. Which number is the odd one out?

7

24

9

36

Why? _____

7

24

9

36

7

Do not hunt for the odd one — hunt for what the OTHERS share. Testing each candidate on its own is testing it against nothing, and that is guessing with extra steps.

Look for a property three of them have: 24, 9, 36 — they are all multiples of 3.

7 is the one that does not, so it is the odd one out. And being able to SAY the shared property is what makes it an answer rather than a guess.

2. $\blacksquare + \blacksquare = 20$ and $\blacklozenge - \blacksquare = 18$. What is $\blacklozenge$? _____

Why? _____

$$20 \div 2 = 10$$

$$18 + 10 = 28$$

Two unknown symbols and two facts. Do not start where the question points — start where there is only ONE thing you do not know, because that is the only place an answer can come from.

The first fact has the same symbol twice and nothing else, so it is that symbol doubled: half of 20 is 10.

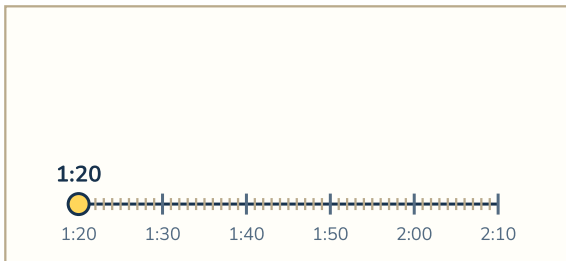
Now the next fact has only one unknown left in it — the 10 was taken OFF it to leave 18, so put it back: $18 + 10 = 28$.

Solutions (6 of 14)

Telling the Time

Elapsed time

1. $1:20 \rightarrow 2:10 = \underline{\quad} \text{ min}$



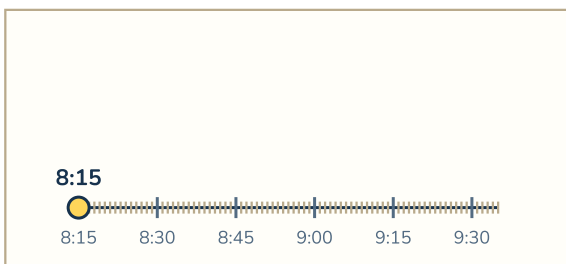
From 1:20 to 2:10. Count **FORWARDS** rather than taking one from the other — then nothing has to be borrowed and the hour never bites.

First hop: up to the next o'clock. 1:20 to 2:00 is 40 minutes.

Then the last 10 minutes to reach 2:10.

Add the hops up: $40 + 10$ — that is 50 minutes.

2. $8:15 \rightarrow 9:35 = \underline{\quad} \text{ min}$



From 8:15 to 9:35. Count **FORWARDS** rather than taking one from the other — then nothing has to be borrowed and the hour never bites.

First hop: up to the next o'clock. 8:15 to 9:00 is 45 minutes.

Then the last 35 minutes to reach 9:35.

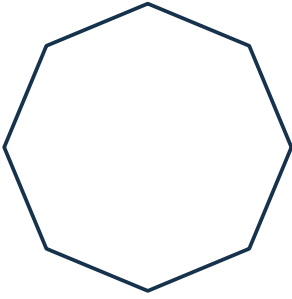
Add the hops up: $45 + 35$ — that is 1 hour and 20 minutes, or 80 minutes in all.

Solutions (7 of 14)

Naming Shapes

Name the shape

1.



hexagon

octagon

square

sides: 8

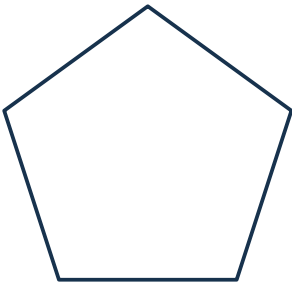
octagon

Count the sides first — that is what almost every shape name is built from, and it is one number rather than a picture to recognize.

8 sides makes it an octagon.

So it is an octagon.

2.



octagon

pentagon

square

sides: 5

pentagon

Count the sides first — that is what almost every shape name is built from, and it is one number rather than a picture to recognize.

5 sides makes it a pentagon.

So it is a pentagon.

Solutions (8 of 14)

Equal Shares

Name the fraction

1. = —

pieces in all: 5

shaded: 1

$$\frac{1}{5}$$

Count the BOTTOM number first, and count every piece — shaded and unshaded together. It is how many the whole was cut into: 5.

Only now count the shaded ones: 1. The number NOT shaded (4) is also sitting there in the picture, and writing that underneath is the usual mistake.

Shaded over total: 1/5.

2. = —

pieces in all: 6

shaded: 3

$$\frac{3}{6}$$

Count the BOTTOM number first, and count every piece — shaded and unshaded together. It is how many the whole was cut into: 6.

Only now count the shaded ones: 3. The number NOT shaded (3) is also sitting there in the picture, and writing that underneath is the usual mistake.

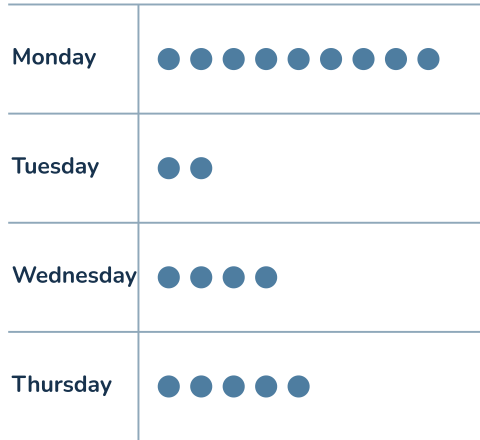
Shaded over total: 3/6.

Solutions (9 of 14)

Picture Graphs and Bar Graphs

Picture graphs

1. Shells found on the beach



Each ● stands for 1.

Which has the fewest?

Monday:	9 drawn	→	9 shells
Tuesday:	2 drawn	→	2 shells
Wednesday:	4 drawn	→	4 shells
Thursday:	5 drawn	→	5 shells

Tuesday

Check the key first, every time. Here one picture is one shell, so counting is enough — but that is a fact to check, not to assume.

So the counts read straight off: Monday 9, Tuesday 2, Wednesday 4, Thursday 5.

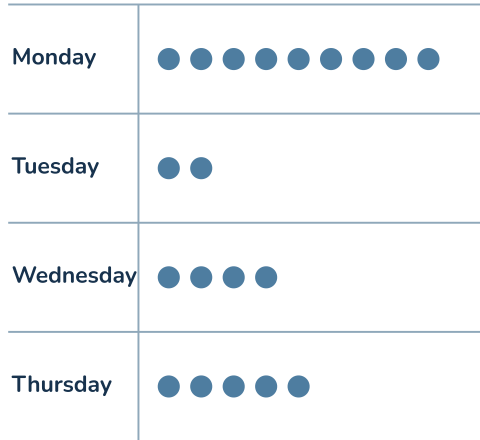
Now the question, on the NUMBERS rather than the marks: Tuesday (2). So the answer is Tuesday.

Solutions (10 of 14)

Picture Graphs and Bar Graphs (continued)

Picture graphs (continued)

2. Shells found on the beach



Each ● stands for 1.

How many altogether?

—

Monday:	9 drawn	→	9 shells
Tuesday:	2 drawn	→	2 shells
Wednesday:	4 drawn	→	4 shells
Thursday:	5 drawn	→	5 shells

20 shells

Check the key first, every time. Here one picture is one shell, so counting is enough — but that is a fact to check, not to assume.

So the counts read straight off: Monday 9, Tuesday 2, Wednesday 4, Thursday 5.

Now the question, on the NUMBERS rather than the marks: $9 + 2 + 4 + 5 = 20$. So the answer is 20 shells.

Solutions (11 of 14)

Picture Graphs and Bar Graphs (continued)

Bar graphs



Which has the most?

Ali: 5 up → 5 books

Bea: 9 up → 9 books

Caz: 7 up → 7 books

Dev: 6 up → 6 books

Bea

Check the key first, every time. Here one square is one book, so counting is enough — but that is a fact to check, not to assume.

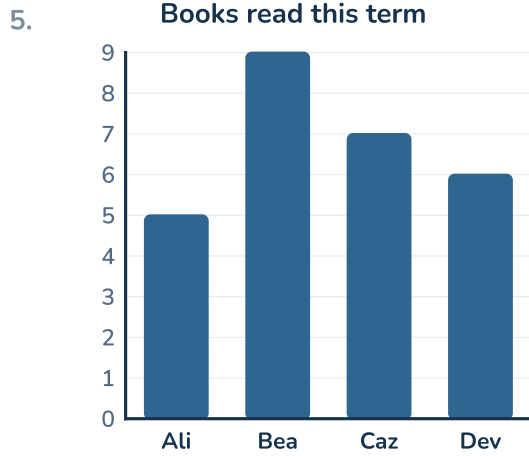
So the counts read straight off: Ali 5, Bea 9, Caz 7, Dev 6.

Now the question, on the NUMBERS rather than the marks: Bea (9). So the answer is Bea.

Solutions (12 of 14)

Picture Graphs and Bar Graphs (continued)

Bar graphs (continued)



Which has the fewest?

Ali: 5 up → 5 books

Bea: 9 up → 9 books

Caz: 7 up → 7 books

Dev: 6 up → 6 books

Ali

Check the key first, every time. Here one square is one book, so counting is enough — but that is a fact to check, not to assume.

So the counts read straight off: Ali 5, Bea 9, Caz 7, Dev 6.

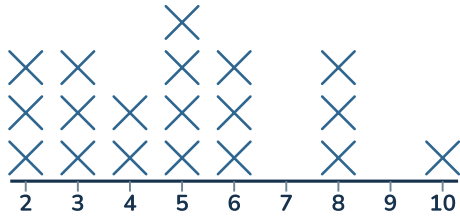
Now the question, on the NUMBERS rather than the marks: Ali (5). So the answer is Ali.

Solutions (13 of 14)

Line Plots

Line plots

1. Length of worms we found (inches)



How many worms were longer than 3 inches?

—

2 inches: 3 worms
3 inches: 3 worms
4 inches: 2 worms
5 inches: 4 worms
6 inches: 3 worms
8 inches: 3 worms
10 inches: 1 worms

13

A line plot is not bars to read off a scale — each mark is one worm. So the number **ALONG** the bottom and the number of marks **ABOVE** it are two different quantities, and the question wants one of them.

Counting the stacks: 3 at 2, 3 at 3, 2 at 4, 4 at 5, 3 at 6, 3 at 8, 1 at 10.

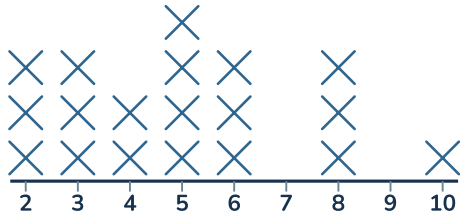
longer than 3 inches — 13 worms — so the answer is 13.

Solutions (14 of 14)

Line Plots (continued)

Line plots (continued)

2. Length of worms we found (inches)



How many worms were longer than 4 inches?

—

2 inches: 3 worms
3 inches: 3 worms
4 inches: 2 worms
5 inches: 4 worms
6 inches: 3 worms
8 inches: 3 worms
10 inches: 1 worms

11

A line plot is not bars to read off a scale — each mark is one worm. So the number **ALONG** the bottom and the number of marks **ABOVE** it are two different quantities, and the question wants one of them.

Counting the stacks: 3 at 2, 3 at 3, 2 at 4, 4 at 5, 3 at 6, 3 at 8, 1 at 10.

longer than 4 inches — 11 worms — so the answer is 11.