

Grade 1 Foundation Workbook

10 lessons · printable · answer key at the back

Name _____ Date _____

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Adding within 10

WORKED EXAMPLE

$$2 + 6 = \underline{8}$$

1. Addition

Work out each sum.

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

2. Word problems: adding

Read each problem. Write the answer.

- 25 First Leo bought 5 stickers, and then 4 more.

How many stickers does Leo have altogether?

- 26 Zoe had 10 pencils before buying 2 more at the library.

How many pencils does Zoe have now?

- 27 Maya and Max have some cookies. Maya has 5 and Max has 4.

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

- 28 Zoe had 9 cookies before collecting 4 more at the park.

How many cookies does Zoe have now?

Subtracting within 10

WORKED EXAMPLE

$$10 - 4 = \underline{6}$$

3. Subtraction

Work out each difference.

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

4. Word problems: subtracting

Read each problem. Write the answer.

- 24 Max has 10 cookies, while Leo has only 9 cookies.

How many more cookies does Max have than Leo?

- 25 Max began with 6 apples. After buying some more, Max had 8 apples.

How many apples did Max buy?

- 26 Of the 12 stickers that Nina and Ava share, 9 are Nina's.

How many stickers are Ava's?

Making 10

5. Make ten

Write the number that makes each one.

1 $7 + \underline{\quad} = 10$ 2 $3 + \underline{\quad} = 10$ 3 $8 + \underline{\quad} = 10$ 4 $4 + \underline{\quad} = 10$

5 $6 + \underline{\quad} = 10$ 6 $5 + \underline{\quad} = 10$ 7 $2 + \underline{\quad} = 10$ 8 $1 + \underline{\quad} = 10$

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

Adding within 20

WORKED EXAMPLE

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

6. Addition

Work out each sum.

1 $2 + 3 = \underline{\quad}$

2 $11 + 1 = \underline{\quad}$

3 $6 + 10 = \underline{\quad}$

4 $0 + 12 = \underline{\quad}$

5 $1 + 8 = \underline{\quad}$

6 $14 + 0 = \underline{\quad}$

7 $4 + 6 = \underline{\quad}$

8 $0 + 3 = \underline{\quad}$

9 $1 + 13 = \underline{\quad}$

10 $10 + 0 = \underline{\quad}$

11 $3 + 14 = \underline{\quad}$

12 $0 + 6 = \underline{\quad}$

13 $0 + 0 = \underline{\quad}$

14 $2 + 15 = \underline{\quad}$

15 $6 + 2 = \underline{\quad}$

16 $4 + 4 = \underline{\quad}$

17 $4 + 3 = \underline{\quad}$

18 $2 + 9 = \underline{\quad}$

19 $1 + 3 = \underline{\quad}$

20 $0 + 7 = \underline{\quad}$

21 $0 + 15 = \underline{\quad}$

22 $13 + 1 = \underline{\quad}$

23 $1 + 11 = \underline{\quad}$

24 $1 + 12 = \underline{\quad}$

7. Word problems: adding

Read each problem. Write the answer.

- 25 Max was given 5 cookies near the corner store, then 2 more.

How many cookies does Max have now?

- 26 Maya was given 9 stickers near the school gate, then 6 more.

How many stickers does Maya have now?

- 27 Max already had 10 stickers by the school gate, and then was given 9 more.

How many stickers does Max have in all?

Subtracting within 20

WORKED EXAMPLE

$$13 - 9 = \underline{4}$$

8. Subtraction

Work out each difference.

1 $13 - 3 = \underline{\quad}$

2 $5 - 2 = \underline{\quad}$

3 $16 - 5 = \underline{\quad}$

4 $8 - 3 = \underline{\quad}$

5 $13 - 12 = \underline{\quad}$

6 $9 - 8 = \underline{\quad}$

7 $13 - 5 = \underline{\quad}$

8 $9 - 0 = \underline{\quad}$

9 $6 - 1 = \underline{\quad}$

10 $5 - 5 = \underline{\quad}$

11 $17 - 10 = \underline{\quad}$

12 $11 - 11 = \underline{\quad}$

13 $8 - 2 = \underline{\quad}$

14 $16 - 6 = \underline{\quad}$

15 $7 - 7 = \underline{\quad}$

16 $9 - 4 = \underline{\quad}$

17 $9 - 5 = \underline{\quad}$

18 $15 - 2 = \underline{\quad}$

19 $6 - 4 = \underline{\quad}$

20 $1 - 1 = \underline{\quad}$

21 $12 - 4 = \underline{\quad}$

22 $6 - 6 = \underline{\quad}$

23 $10 - 10 = \underline{\quad}$

9. Word problems: subtracting

Read each problem. Write the answer.

- 24 Of the 8 apples Leo had, only 6 apples remained.

How many apples did Leo eat?

- 25 Max once had 6 apples but ate 5.

How many apples does Max have now?

- 26 Nina has 6 cookies. Maya has only 2.

How many more cookies does Nina have than Maya?

Missing Numbers

WORKED EXAMPLE

$$\underline{1} + 15 = 16$$

10. Missing numbers: adding

Write the missing number in each one.

1 $\underline{\quad} + 2 = 2$

2 $5 + \underline{\quad} = 7$

3 $\underline{\quad} + 10 = 16$

4 $\underline{\quad} + 11 = 14$

5 $7 + \underline{\quad} = 9$

6 $\underline{\quad} + 1 = 7$

7 $6 + \underline{\quad} = 10$

8 $1 + \underline{\quad} = 2$

9 $\underline{\quad} + 4 = 7$

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

11 $\underline{\quad} + 6 = 17$

12 $8 + \underline{\quad} = 9$

13 $0 + \underline{\quad} = 5$

14 $8 + \underline{\quad} = 12$

15 $1 + \underline{\quad} = 11$

16 $\underline{\quad} + 0 = 3$

17 $\underline{\quad} + 4 = 6$

18 $5 + \underline{\quad} = 16$

19 $2 + \underline{\quad} = 13$

20 $14 + \underline{\quad} = 14$

21 $\underline{\quad} + 1 = 17$

22 $12 + \underline{\quad} = 13$

23 $\underline{\quad} + 10 = 13$

24 $\underline{\quad} + 13 = 13$

11. Missing numbers: subtracting

Write the missing number in each one.

25 $\underline{\quad} - 10 = 3$

26 $\underline{\quad} - 3 = 6$

27 $\underline{\quad} - 3 = 9$

28 $\underline{\quad} - 5 = 1$

29 $9 - \underline{\quad} = 1$

30 $\underline{\quad} - 12 = 2$

31 $15 - \underline{\quad} = 1$

32 $7 - \underline{\quad} = 5$

33 $6 - \underline{\quad} = 4$

34 $\underline{\quad} - 5 = 0$

35 $\underline{\quad} - 10 = 7$

36 $8 - \underline{\quad} = 4$

37 $\underline{\quad} - 7 = 2$

38 $\underline{\quad} - 9 = 4$

39 $\underline{\quad} - 6 = 2$

40 $\underline{\quad} - 0 = 10$

41 $7 - \underline{\quad} = 0$

42 $\underline{\quad} - 15 = 0$

43 $9 - \underline{\quad} = 4$

44 $3 - \underline{\quad} = 3$

45 $17 - \underline{\quad} = 10$

46 $14 - \underline{\quad} = 11$

47 $\underline{\quad} - 1 = 4$

48 $\underline{\quad} - 0 = 9$

WORKED EXAMPLE

$$50 + 1 \rightarrow \underline{51}$$

12. Reading expanded form

Write the number each expanded form makes.

1 $50 \rightarrow \underline{\quad}$

2 $90 + 4 \rightarrow \underline{\quad}$

3 $50 + 8 \rightarrow \underline{\quad}$

4 $70 + 9 \rightarrow \underline{\quad}$

5 $30 + 9 \rightarrow \underline{\quad}$

6 $30 + 3 \rightarrow \underline{\quad}$

7 $30 + 1 \rightarrow \underline{\quad}$

8 $20 + 6 \rightarrow \underline{\quad}$

9 $40 + 8 \rightarrow \underline{\quad}$

10 $90 + 8 \rightarrow \underline{\quad}$

11 $40 + 4 \rightarrow \underline{\quad}$

12 $90 + 9 \rightarrow \underline{\quad}$

13 $40 + 1 \rightarrow \underline{\quad}$

14 $70 + 2 \rightarrow \underline{\quad}$

15 $80 \rightarrow \underline{\quad}$

16 $10 + 4 \rightarrow \underline{\quad}$

17 $70 + 6 \rightarrow \underline{\quad}$

18 $60 + 9 \rightarrow \underline{\quad}$

19 $60 + 4 \rightarrow \underline{\quad}$

20 $40 + 2 \rightarrow \underline{\quad}$

21 $80 + 4 \rightarrow \underline{\quad}$

22 $10 + 5 \rightarrow \underline{\quad}$

23 $90 + 2 \rightarrow \underline{\quad}$

24 $40 + 3 \rightarrow \underline{\quad}$

25 $80 + 6 \rightarrow \underline{\quad}$

26 $30 + 4 \rightarrow \underline{\quad}$

27 $30 + 5 \rightarrow \underline{\quad}$

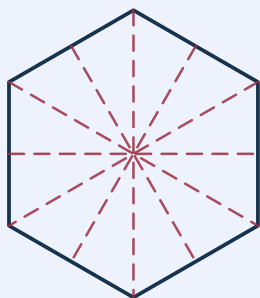
28 $40 \rightarrow \underline{\quad}$

29 $30 + 8 \rightarrow \underline{\quad}$

30 $30 \rightarrow \underline{\quad}$

Naming Shapes

WORKED EXAMPLE

**hexagon**

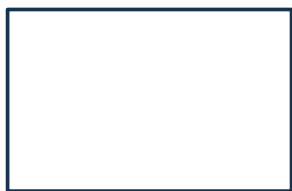
rectangle

square

13. Name the shape

Circle the name of each shape.

1

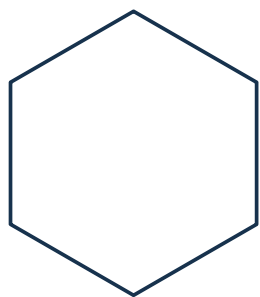


octagon

pentagon

rectangle

3

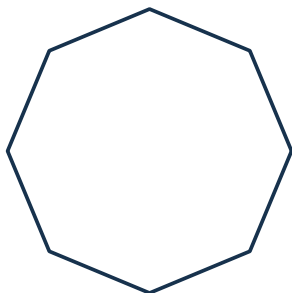


hexagon

rectangle

triangle

5

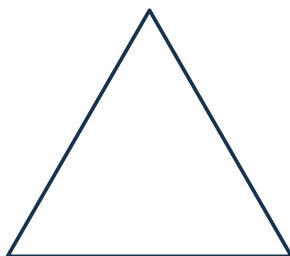


hexagon

octagon

rectangle

2

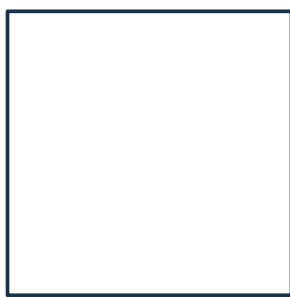


octagon

square

triangle

4

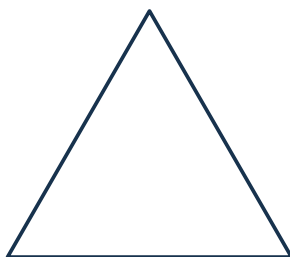


pentagon

square

triangle

6



pentagon

square

triangle

Word Problems

WORKED EXAMPLE

Nina collected 7 cookies near the library, then 4 more.

How many cookies does Nina have now?

ANSWER: $7 + 4 = 11$ cookies

14. Word problems: adding

Read each problem. Write the answer.

- 1 Leo collected 11 cookies near the corner store, then 2 more.

How many cookies does Leo have now?

- 2 Ava collected 8 cookies near the corner store, then 2 more.

How many cookies does Ava have now?

15. Word problems: subtracting

Read each problem. Write the answer.

- 3 Ava has 5 cookies, while Zoe has 3.

How many more cookies does Ava have than Zoe?

- 4 Ava and Maya share 14 cookies, and 12 of them are Ava's.

How many cookies belong to Maya?

Review: Adding and Subtracting

WORKED EXAMPLE

$$2 + 11 = \underline{13}$$

16. Addition

Work out each sum.

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

2 $6 + 0 = \underline{\quad}$

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

4 $1 + 0 = \underline{\quad}$

5 $3 + 4 = \underline{\quad}$

6 $4 + 1 = \underline{\quad}$

7 $4 + 6 = \underline{\quad}$

8 $5 + 4 = \underline{\quad}$

9 $1 + 7 = \underline{\quad}$

17. Subtraction

Work out each difference.

10 $13 - 1 = \underline{\quad}$

11 $9 - 9 = \underline{\quad}$

12 $17 - 15 = \underline{\quad}$

13 $6 - 0 = \underline{\quad}$

14 $8 - 6 = \underline{\quad}$

15 $5 - 1 = \underline{\quad}$

16 $10 - 7 = \underline{\quad}$

17 $2 - 2 = \underline{\quad}$

18 $13 - 0 = \underline{\quad}$

18. Word problems: mixed

Read each problem. Write the answer.

- 19 Ava set out with 9 stickers and ended up using 4 of them.

How many stickers are left now?

- 20 Out of 9 stickers, Ava gave away 2.

How many stickers does Ava have left?

- 21 Zoe has 10 stickers, while Maya has only 9 stickers.

How many more stickers does Zoe have than Maya?

Answer Key (1 of 4)

Adding within 10

Addition

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

Word problems: adding

25. $5 + 4 = 9$ stickers
26. $10 + 2 = 12$ pencils
27. $5 + 4 = 9$ cookies
28. $9 + 4 = 13$ cookies

Subtracting within 10

Subtraction

1. $5 - 2 = 3$
2. $2 - 0 = 2$
3. $7 - 4 = 3$
4. $3 - 0 = 3$

Subtracting within 10 (continued)

Subtraction (continued)

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

Word problems: subtracting

24. $10 - 9 = 1$ cookie
25. $8 - 6 = 2$ apples
26. $12 - 9 = 3$ stickers

Making 10

Make ten

1. $7 + 3 = 10$
2. $3 + 7 = 10$
3. $8 + 2 = 10$
4. $4 + 6 = 10$
5. $6 + 4 = 10$
6. $5 + 5 = 10$
7. $2 + 8 = 10$
8. $1 + 9 = 10$
9. $9 + 1 = 10$

Answer Key (2 of 4)

Adding within 20

Addition

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

Word problems: adding

25. $5 + 2 = 7$ cookies
26. $9 + 6 = 15$ stickers
27. $10 + 9 = 19$ stickers

Subtracting within 20

Subtraction

1. $13 - 3 = 10$
2. $5 - 2 = 3$
3. $16 - 5 = 11$
4. $8 - 3 = 5$
5. $13 - 12 = 1$

Subtracting within 20 (continued)

Subtraction (continued)

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

Word problems: subtracting

24. $8 - 6 = 2$ apples
25. $6 - 5 = 1$ apple
26. $6 - 2 = 4$ cookies

Missing Numbers

Missing numbers: adding

1. $0 + 2 = 2$
2. $5 + 2 = 7$
3. $6 + 10 = 16$
4. $3 + 11 = 14$
5. $7 + 2 = 9$
6. $6 + 1 = 7$
7. $6 + 4 = 10$
8. $1 + 1 = 2$
9. $3 + 4 = 7$
10. $0 + 3 = 3$
11. $11 + 6 = 17$

Answer Key (3 of 4)

Missing Numbers (continued)

Missing numbers: adding (continued)

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

Missing numbers: subtracting

25. $13 - 10 = 3$
26. $9 - 3 = 6$
27. $12 - 3 = 9$
28. $6 - 5 = 1$
29. $9 - 8 = 1$
30. $14 - 12 = 2$
31. $15 - 14 = 1$
32. $7 - 2 = 5$
33. $6 - 2 = 4$
34. $5 - 5 = 0$
35. $17 - 10 = 7$
36. $8 - 4 = 4$
37. $9 - 7 = 2$
38. $13 - 9 = 4$
39. $8 - 6 = 2$
40. $10 - 0 = 10$
41. $7 - 7 = 0$
42. $15 - 15 = 0$
43. $9 - 5 = 4$
44. $3 - 0 = 3$
45. $17 - 7 = 10$
46. $14 - 3 = 11$

Missing Numbers (continued)

Missing numbers: subtracting (continued)

47. $5 - 1 = 4$
48. $9 - 0 = 9$

Tens and Ones

Reading expanded form

1. $50 = 50$
2. $90 + 4 = 94$
3. $50 + 8 = 58$
4. $70 + 9 = 79$
5. $30 + 9 = 39$
6. $30 + 3 = 33$
7. $30 + 1 = 31$
8. $20 + 6 = 26$
9. $40 + 8 = 48$
10. $90 + 8 = 98$
11. $40 + 4 = 44$
12. $90 + 9 = 99$
13. $40 + 1 = 41$
14. $70 + 2 = 72$
15. $80 = 80$
16. $10 + 4 = 14$
17. $70 + 6 = 76$
18. $60 + 9 = 69$
19. $60 + 4 = 64$
20. $40 + 2 = 42$
21. $80 + 4 = 84$
22. $10 + 5 = 15$
23. $90 + 2 = 92$
24. $40 + 3 = 43$
25. $80 + 6 = 86$
26. $30 + 4 = 34$
27. $30 + 5 = 35$
28. $40 = 40$
29. $30 + 8 = 38$
30. $30 = 30$

Answer Key (4 of 4)

Naming Shapes

Name the shape

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

Review: Adding and Subtracting (continued)

Subtraction (continued)

15. $5 - 1 = 4$
16. $10 - 7 = 3$
17. $2 - 2 = 0$
18. $13 - 0 = 13$

Word problems: mixed

19. $9 - 4 = 5$ stickers
20. $9 - 2 = 7$ stickers
21. $10 - 9 = 1$ sticker

Word Problems

Word problems: adding

1. $11 + 2 = 13$ cookies
2. $8 + 2 = 10$ cookies

Word problems: subtracting

3. $5 - 3 = 2$ cookies
4. $14 - 12 = 2$ cookies

Review: Adding and Subtracting

Addition

1. $1 + 1 = 2$
2. $6 + 0 = 6$
3. $10 + 7 = 17$
4. $1 + 0 = 1$
5. $3 + 4 = 7$
6. $4 + 1 = 5$
7. $4 + 6 = 10$
8. $5 + 4 = 9$
9. $1 + 7 = 8$

Subtraction

10. $13 - 1 = 12$
11. $9 - 9 = 0$
12. $17 - 15 = 2$
13. $6 - 0 = 6$
14. $8 - 6 = 2$

Solutions (1 of 6)

Adding within 10

Word problems: adding

25. First Leo bought 5 stickers, and then 4 more.

How many stickers does Leo have altogether? ____

asked:

How many stickers does Leo have altogether?

$$5 + 4 = 9$$

9 stickers

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: 5 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.

Amounts are joining together. So this one is an addition: $5 + 4$.

$5 + 4 = 9$ stickers. And answer the question that was ASKED — "How many stickers does Leo have altogether?" — in stickers, because the sum on its own is not yet an answer.

Solutions (2 of 6)

Adding within 10 (continued)

Word problems: adding (continued)

26. Zoe had 10 pencils before buying 2 more at the library.

How many pencils does Zoe have now? ____

asked:

How many pencils does Zoe have
now?

$$10 + 2 = 12$$

12 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: 10 and 2. 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.

Amounts are joining together. So this one is an addition: $10 + 2$.

$10 + 2 = 12$ pencils. And answer the question that was ASKED — "How many pencils does Zoe have now?" — in pencils, because the sum on its own is not yet an answer.

Solutions (3 of 6)

Making 10

Make ten

1. $7 + \underline{\quad} = 10$



$$7 + 3 = 10$$

7 and 3 3 and 7

Picture ten spaces in a row with 7 of them filled. The question is how many are still empty — not a sum to work out so much as a gap to see.

Count the empty ones: 3. So 7 and 3 make 10.

This pair is worth knowing by heart rather than counting each time — there are only five of them for ten, and 3 and 7 is the same pair the other way round. They are what makes $8 + 5$ easy later: take 2 from the 5 to finish the ten.

2. $3 + \underline{\quad} = 10$



$$3 + 7 = 10$$

3 and 7 7 and 3

Picture ten spaces in a row with 3 of them filled. The question is how many are still empty — not a sum to work out so much as a gap to see.

Count the empty ones: 7. So 3 and 7 make 10.

This pair is worth knowing by heart rather than counting each time — there are only five of them for ten, and 7 and 3 is the same pair the other way round. They are what makes $8 + 5$ easy later: take 2 from the 5 to finish the ten.

Solutions (4 of 6)

Tens and Ones

Reading expanded form

1. $50 \rightarrow \underline{\hspace{1cm}}$

$$50 = 50$$

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: 50.

2. $90 + 4 \rightarrow \underline{\hspace{1cm}}$

$$90 + 4 = 94$$

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: 94.

Solutions (5 of 6)

Naming Shapes

Name the shape

1.



octagon

pentagon

rectangle

rectangle is also
a parallelogram (both
pairs of sides parallel)

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.

4 sides makes it a quadrilateral — and that is where naming gets more careful, because the four-sided shapes have families inside families.

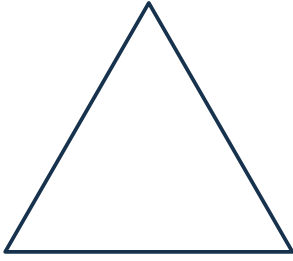
This one is a rectangle — and it is ALSO a parallelogram (both pairs of sides parallel). Being one does not stop it being the others; the question wants the most exact name that fits.

Solutions (6 of 6)

Naming Shapes (continued)

Name the shape (continued)

2.



octagon

square

triangle

sides: 3

triangle

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.

3 sides makes it a triangle.

So it is a triangle.