

Grade 2 Time, Shapes and Patterns Workbook

7 lessons · printable · answer key at the back

Name _____ Date _____

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WORKED EXAMPLE

2, 8, 14, 20, 26

1. 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 | |

2. Reading expanded form

Write the number each expanded form makes.

- | | |
|------------------------------------|------------------------------------|
| 51 $400 + 70 + 4 \rightarrow$ ____ | 52 $600 + 40 + 2 \rightarrow$ ____ |
| 53 $100 + 80 + 9 \rightarrow$ ____ | 54 $500 + 9 \rightarrow$ ____ |
| 55 $400 + 30 + 7 \rightarrow$ ____ | 56 $300 + 80 + 9 \rightarrow$ ____ |
| 57 $100 + 40 + 7 \rightarrow$ ____ | 58 $900 + 20 + 5 \rightarrow$ ____ |
| 59 $400 + 9 \rightarrow$ ____ | 60 $600 + 80 + 3 \rightarrow$ ____ |

WORKED EXAMPLE

The sum of two even numbers is even.

always

sometimes

never

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

3. Reasoning puzzles

Read each question and write what you work out.

- 1 Priya wrote $13 + 52 = 66$. Write the correct answer.

Why?

- 2 Which number is the odd one out?

51

8

27

18

Why?

- 3 Mia wrote $47 + 26 = 63$. Write the correct answer.

Why?

- 4 Which number is the odd one out?

7

54

39

46

Why?

- 5 $\blacksquare + \blacksquare = 26$ and $\blacksquare + \bullet = 21$. What is $\bullet$?

Why?

- 6 Which number is the odd one out?

10

19

15

30

Why?

- 7 $\blacktriangle + \blacktriangle = 14$ and $\blacksquare - \blacktriangle = 8$. What is $\blacksquare$?

Why?

Telling the Time

WORKED EXAMPLE

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

4. Elapsed time

Write how many minutes pass between the two times.

- | | |
|--|--|
| 1 $2:20 \rightarrow 2:50 = \underline{\hspace{1cm}}$
min | 2 $1:20 \rightarrow 2:10 = \underline{\hspace{1cm}}$
min |
| 3 $4:25 \rightarrow 4:45 = \underline{\hspace{1cm}}$
min | 4 $5:30 \rightarrow 5:40 = \underline{\hspace{1cm}}$
min |
| 5 $8:15 \rightarrow 9:35 = \underline{\hspace{1cm}}$
min | 6 $3:20 \rightarrow 4:15 = \underline{\hspace{1cm}}$
min |
| 7 $7:45 \rightarrow 8:00 = \underline{\hspace{1cm}}$
min | 8 $7:30 \rightarrow 7:55 = \underline{\hspace{1cm}}$
min |
| 9 $6:35 \rightarrow 7:00 = \underline{\hspace{1cm}}$
min | 10 $7:40 \rightarrow 8:55 = \underline{\hspace{1cm}}$
min |
| 11 $1:55 \rightarrow 2:10 = \underline{\hspace{1cm}}$
min | 12 $6:05 \rightarrow 6:15 = \underline{\hspace{1cm}}$
min |
| 13 $11:35 \rightarrow 12:15 = \underline{\hspace{1cm}}$
min | 14 $7:55 \rightarrow 9:10 = \underline{\hspace{1cm}}$
min |
| 15 $3:50 \rightarrow 4:10 = \underline{\hspace{1cm}}$
min | 16 $10:30 \rightarrow 11:10 = \underline{\hspace{1cm}}$
min |
| 17 $8:00 \rightarrow 8:25 = \underline{\hspace{1cm}}$
min | 18 $5:50 \rightarrow 7:05 = \underline{\hspace{1cm}}$
min |
| 19 $7:05 \rightarrow 7:55 = \underline{\hspace{1cm}}$
min | 20 $8:15 \rightarrow 9:05 = \underline{\hspace{1cm}}$
min |
| 21 $4:35 \rightarrow 4:45 = \underline{\hspace{1cm}}$
min | 22 $9:45 \rightarrow 11:05 = \underline{\hspace{1cm}}$
min |
| 23 $1:15 \rightarrow 2:00 = \underline{\hspace{1cm}}$
min | 24 $1:10 \rightarrow 1:45 = \underline{\hspace{1cm}}$
min |
| 25 $12:10 \rightarrow 12:45 = \underline{\hspace{1cm}}$
min | 26 $2:35 \rightarrow 4:00 = \underline{\hspace{1cm}}$
min |

5. Add and subtract multi-digit numbers

Subtract. Work down the columns.

$$\begin{array}{r} 27 \quad 559 \\ - 495 \\ \hline \end{array}$$

$$\begin{array}{r} 28 \quad 811 \\ - 113 \\ \hline \end{array}$$

$$\begin{array}{r} 29 \quad 411 \\ - 387 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \quad 409 \\ - 201 \\ \hline \end{array}$$

$$\begin{array}{r} 31 \quad 916 \\ - 202 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \quad 773 \\ - 110 \\ \hline \end{array}$$

$$\begin{array}{r} 33 \quad 601 \\ - 478 \\ \hline \end{array}$$

$$\begin{array}{r} 34 \quad 479 \\ - 308 \\ \hline \end{array}$$

Naming Shapes

WORKED EXAMPLE



rectangle

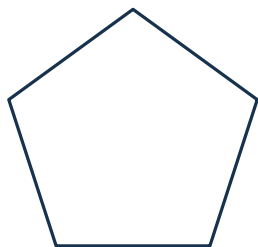
square

triangle

6. Name the shape

Circle the name of each shape.

1

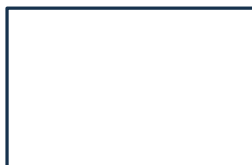


octagon

pentagon

square

2

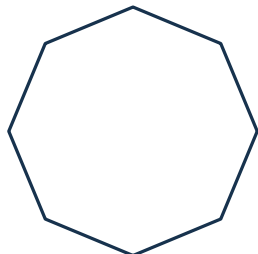


hexagon

pentagon

rectangle

3



hexagon

octagon

square

4

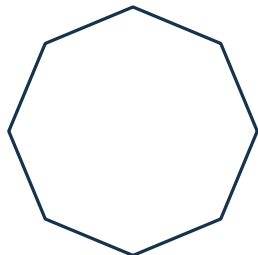


hexagon

square

triangle

5



octagon

rectangle

triangle

6



hexagon

octagon

rectangle

7. 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

WORKED EXAMPLE

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

8. Name the fraction

Answer each question.



9. Subtraction

Work out each difference.

13 $64 - 23 = \underline{\quad}$

14 $89 - 22 = \underline{\quad}$

15 $44 - 29 = \underline{\quad}$

16 $92 - 50 = \underline{\quad}$

17 $89 - 9 = \underline{\quad}$

18 $64 - 61 = \underline{\quad}$

19 $95 - 34 = \underline{\quad}$

20 $50 - 28 = \underline{\quad}$

21 $58 - 14 = \underline{\quad}$

22 $95 - 7 = \underline{\quad}$

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.

10. 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	●

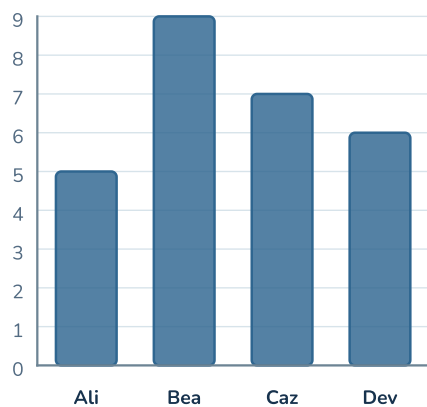
Each ● stands for 1.

3 How many fewer hearts than stars?

11. Bar graphs

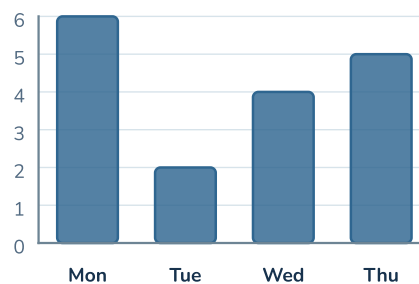
Read each bar graph and answer the question.

Books read this term



4 Which has the most?

Shells found on the beach



6 How many fewer on Tuesday than on Monday?

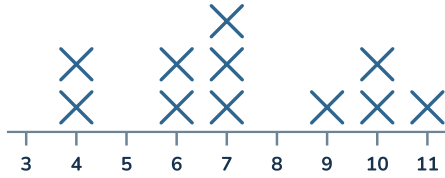
5 Which has the fewest?

Line Plots

12. Line plots

Read each line plot and answer the question.

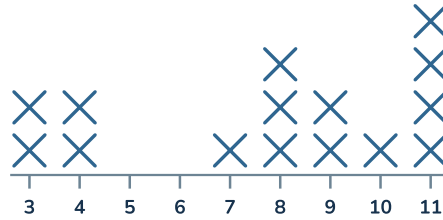
Length of our pencils (inches)



- 1 How many more pencils measured 7 inches than 4 inches?

—

Height of the bean plants (inches)



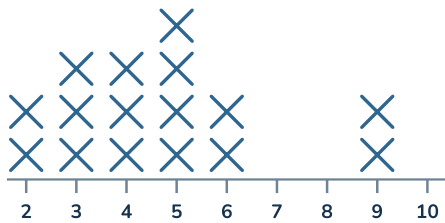
- 2 How many plants were measured altogether?

—

- 3 How many plants were longer than 4 inches?

—

Width of the shells (inches)



- 4 How many more shells measured 3 inches than 9 inches?

—

- 5 How many more shells measured 4 inches than 2 inches?

—

- 6 How many more shells measured 4 inches than 6 inches?

—

13. Elapsed time

Write how many minutes pass between the two times.

7 **10:40 → 11:10 = ____**
min

8 **3:00 → 3:05 = ____**
min

9 **5:40 → 7:05 = ____**
min

10 **9:35 → 10:00 = ____**
min

11 **4:45 → 5:50 = ____**
min

12 **6:40 → 7:30 = ____**
min

Answer Key (1 of 3)

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
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

Number Patterns (continued)

Number patterns (continued)

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. $400 + 70 + 4 = 474$
52. $600 + 40 + 2 = 642$
53. $100 + 80 + 9 = 189$
54. $500 + 9 = 509$
55. $400 + 30 + 7 = 437$
56. $300 + 80 + 9 = 389$
57. $100 + 40 + 7 = 147$
58. $900 + 20 + 5 = 925$
59. $400 + 9 = 409$
60. $600 + 80 + 3 = 683$

True, False or Fix It

Reasoning puzzles

1. $13 + 52 = 65$, not 66 (the answer is one out)
2. 51, 8, 27, 18 $\rightarrow$ 8 (the other three are all multiples of 3)
3. $47 + 26 = 73$, not 63 (a ten was not carried)
4. 7, 54, 39, 46 $\rightarrow$ 7 (the other three are all two-digit numbers)
5. $\blacksquare = 13$, $\bullet = 8$
6. 10, 19, 15, 30 $\rightarrow$ 19 (the other three are all multiples of 5)
7. $\blacktriangle = 7$, $\blacksquare = 15$

Telling the Time

Elapsed time

1. $2:20 \rightarrow 2:50 = 30 \text{ min}$
2. $1:20 \rightarrow 2:10 = 50 \text{ min}$
3. $4:25 \rightarrow 4:45 = 20 \text{ min}$
4. $5:30 \rightarrow 5:40 = 10 \text{ min}$
5. $8:15 \rightarrow 9:35 = 80 \text{ min}$
6. $3:20 \rightarrow 4:15 = 55 \text{ min}$

Answer Key (2 of 3)

Telling the Time (continued)

Elapsed time (continued)

7. $7:45 \rightarrow 8:00 = 15 \text{ min}$
8. $7:30 \rightarrow 7:55 = 25 \text{ min}$
9. $6:35 \rightarrow 7:00 = 25 \text{ min}$
10. $7:40 \rightarrow 8:55 = 75 \text{ min}$
11. $1:55 \rightarrow 2:10 = 15 \text{ min}$
12. $6:05 \rightarrow 6:15 = 10 \text{ min}$
13. $11:35 \rightarrow 12:15 = 40 \text{ min}$
14. $7:55 \rightarrow 9:10 = 75 \text{ min}$
15. $3:50 \rightarrow 4:10 = 20 \text{ min}$
16. $10:30 \rightarrow 11:10 = 40 \text{ min}$
17. $8:00 \rightarrow 8:25 = 25 \text{ min}$
18. $5:50 \rightarrow 7:05 = 75 \text{ min}$
19. $7:05 \rightarrow 7:55 = 50 \text{ min}$
20. $8:15 \rightarrow 9:05 = 50 \text{ min}$
21. $4:35 \rightarrow 4:45 = 10 \text{ min}$
22. $9:45 \rightarrow 11:05 = 80 \text{ min}$
23. $1:15 \rightarrow 2:00 = 45 \text{ min}$
24. $1:10 \rightarrow 1:45 = 35 \text{ min}$
25. $12:10 \rightarrow 12:45 = 35 \text{ min}$
26. $2:35 \rightarrow 4:00 = 85 \text{ min}$

Add and subtract multi-digit numbers

27. $559 - 495 = 64$
28. $811 - 113 = 698$
29. $411 - 387 = 24$
30. $409 - 201 = 208$
31. $916 - 202 = 714$
32. $773 - 110 = 663$
33. $601 - 478 = 123$
34. $479 - 308 = 171$

Naming Shapes

Name the shape

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

Number patterns

7. 5, [10], 15, 20, 25
8. 1, 9, 17, [25], 33

Naming Shapes (continued)

Number patterns (continued)

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

Subtraction

13. $64 - 23 = 41$
14. $89 - 22 = 67$
15. $44 - 29 = 15$
16. $92 - 50 = 42$
17. $89 - 9 = 80$
18. $64 - 61 = 3$
19. $95 - 34 = 61$
20. $50 - 28 = 22$
21. $58 - 14 = 44$
22. $95 - 7 = 88$

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

Answer Key (3 of 3)

Line Plots

Line plots

1. 3 at 7 inches, 2 at 4 inches: $3 - 2 = 1$
2. $2 + 2 + 1 + 3 + 2 + 1 + 4 = 15$
3. longer than 4 inches — 11 plants
4. 3 at 3 inches, 2 at 9 inches: $3 - 2 = 1$
5. 3 at 4 inches, 2 at 2 inches: $3 - 2 = 1$
6. 3 at 4 inches, 2 at 6 inches: $3 - 2 = 1$

Elapsed time

7. $10:40 \rightarrow 11:10 = 30 \text{ min}$
8. $3:00 \rightarrow 3:05 = 5 \text{ min}$
9. $5:40 \rightarrow 7:05 = 85 \text{ min}$
10. $9:35 \rightarrow 10:00 = 25 \text{ min}$
11. $4:45 \rightarrow 5:50 = 65 \text{ min}$
12. $6:40 \rightarrow 7:30 = 50 \text{ min}$

Solutions (1 of 10)

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.

Reading expanded form

51. $400 + 70 + 4 \rightarrow$ ____

$400 + 70 + 4 = 474$

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: 474.

Solutions (2 of 10)

Number Patterns (continued)

Reading expanded form (continued)

52. $600 + 40 + 2 \rightarrow \underline{\hspace{2cm}}$

$$600 + 40 + 2 = 642$$

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: 642.

True, False or Fix It

Reasoning puzzles

1. Priya wrote $13 + 52 = 66$. Write the correct answer. $\underline{\hspace{2cm}}$

Why?

$$13 + 52 = 65$$

they wrote: 66

Do not check by reading their working.

Somebody else's answer is the most persuasive thing on the page, and rereading it is how you end up agreeing with it — work the sum yourself first, then compare.

On your own: $13 + 52 = 65$.

Now compare. They wrote 66, and it should be 65 — out by 1. The correct answer is 65.

2. Which number is the odd one out?

51

8

27

18

Why?

51 8 27 18

8

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: 51, 27, 18 — they are all multiples of 3.

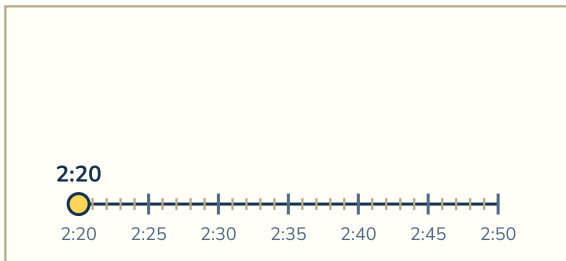
8 is the one that does not, so it is the odd one out. And being able to SAY the shared property is what makes it an answer rather than a guess.

Solutions (3 of 10)

Telling the Time

Elapsed time

1. $2:20 \rightarrow 2:50 = \underline{\quad} \text{ min}$

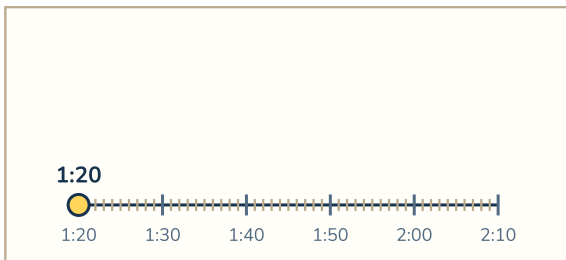


From 2:20 to 2:50. Count **FORWARDS** rather than taking one from the other — then nothing has to be borrowed and the hour never bites.

It all sits inside the one hour, so there is nothing to cross: 30 minutes straight through to 2:50.

Add the hops up: 30 — that is 30 minutes.

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



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.

Add and subtract multi-digit numbers

27.

$$\begin{array}{r} 4 \quad 15 \\ \cancel{5} \quad \cancel{5} \quad 9 \\ 4 \quad 9 \quad 5 \\ \hline 6 \quad 4 \end{array}$$

$559 - 495$, written in columns. Start at the **RIGHT**, with the ones.

9 take away 5 leaves 4. Write it in the ones.

5 is too small to take 9 from, so a ten comes across from the left: the tens now holds 15. $15 - 9 = 6$.

This column gave a ten to the right, so it is now 4, not 5. $4 - 4 = 0$. That 0 would sit in front of the answer, so nothing is written in the hundreds.

That is the whole sum: $559 - 495 = 64$.

Solutions (4 of 10)

Telling the Time (continued)

Add and subtract multi-digit numbers (continued)

28.

$$\begin{array}{r} 7 \text{ } 10 \text{ } 11 \\ \cancel{8} \text{ } \cancel{1} \text{ } \cancel{1} \\ 1 \text{ } 1 \text{ } 3 \\ \hline 6 \text{ } 9 \text{ } 8 \end{array}$$

811 – 113, written in columns. Start at the RIGHT, with the ones.

1 is too small to take 3 from, so a ten comes across from the left: the ones now holds 11. $11 - 3 = 8$.

This column gave a ten to the right, so 1 became 0; 0 is still too small to take 1 from, so a ten comes across from the left and the tens now holds 10. $10 - 1 = 9$.

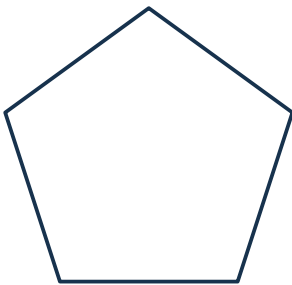
This column gave a ten to the right, so it is now 7, not 8. $7 - 1 = 6$.

That is the whole sum: $811 - 113 = 698$.

Naming Shapes

Name the shape

1.



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 (5 of 10)

Naming Shapes (continued)

Name the shape (continued)

2.



hexagon

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.

Equal Shares

Name the fraction

1. = —

pieces in all: 2

shaded: 1

$\frac{1}{2}$

Count the BOTTOM number first, and count every piece — shaded and unshaded together. It is how many the whole was cut into: 2.

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

Shaded over total: $\frac{1}{2}$.

Solutions (6 of 10)

Equal Shares (continued)

Name the fraction (continued)

2. = —



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

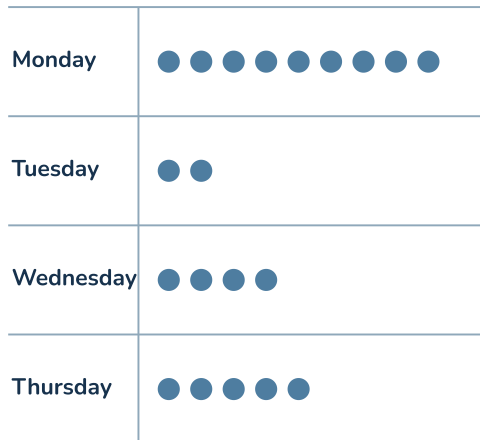
Only now count the shaded ones: 1. The number NOT shaded (4) is also sitting there in the picture, and writing that underneath is the usual mistake.

Shaded over total: 1/5.

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.

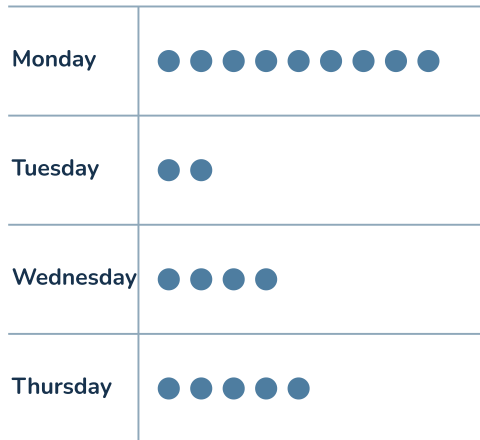
Now the question, on the NUMBERS rather than the marks: Tuesday (2). So the answer is Tuesday.

Solutions (7 of 10)

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 (8 of 10)

Picture Graphs and Bar Graphs (continued)

Bar graphs

4.



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 (9 of 10)

Picture Graphs and Bar Graphs (continued)

Bar graphs (continued)

5.



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.

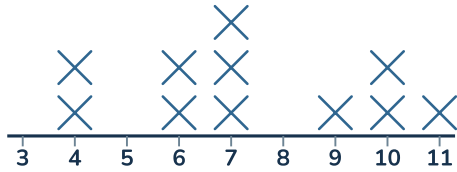
Now the question, on the NUMBERS rather than the marks: Ali (5). So the answer is Ali.

Solutions (10 of 10)

Line Plots

Line plots

1. Length of our pencils (inches)



How many more pencils measured 7 inches than 4 inches?

—

4 inches: 2 pencils
6 inches: 2 pencils
7 inches: 3 pencils
9 inches: 1 pencils
10 inches: 2 pencils
11 inches: 1 pencils

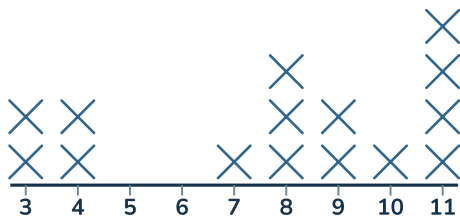
1

A line plot is not bars to read off a scale — each mark is one pencil. 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: 2 at 4, 2 at 6, 3 at 7, 1 at 9, 2 at 10, 1 at 11.

3 at 7 inches, 2 at 4 inches: $3 - 2 = 1$ — so the answer is 1.

2. Height of the bean plants (inches)



How many plants were measured altogether?

—

3 inches: 2 plants
4 inches: 2 plants
7 inches: 1 plants
8 inches: 3 plants
9 inches: 2 plants
10 inches: 1 plants
11 inches: 4 plants

15

A line plot is not bars to read off a scale — each mark is one plant. 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: 2 at 3, 2 at 4, 1 at 7, 3 at 8, 2 at 9, 1 at 10, 4 at 11.

$2 + 2 + 1 + 3 + 2 + 1 + 4 = 15$ — so the answer is 15.