

Reasoning — Odd one out

Name: _____

Date: _____



Read each question and write what you work out.

1 Which number is the odd one out?

24

34

11

3

Why? the other three are all two-digit numbers.

2 Which number is the odd one out?

36

3

21

2

Why?

3 Which number is the odd one out?

59

38

12

52

Why?

4 Which number is the odd one out?

60

35

55

32

Why?

5 Which number is the odd one out?

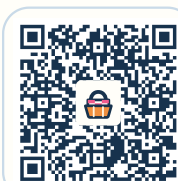
9

60

50

10

Why?



Reasoning — Spot the error

Name: _____

Date: _____



Read each question and write what you work out.

- 1 Ben wrote $56 - 44 = 13$. Write the correct answer. **12**

Why? the answer is one out.

- 2 Mia wrote $42 + 44 = 87$. Write the correct answer. ____

Why? -----

- 3 Noor wrote $41 + 28 = 70$. Write the correct answer. ____

Why? -----

- 4 Ana wrote $60 - 21 = 41$. Write the correct answer. ____

Why? -----

- 5 Priya wrote $3 \times 6 = 9$. Write the correct answer. ____

Why? -----



Reasoning — Symbol puzzles

Name: _____

Date: _____



Read each question and write what you work out.

1 $\blacksquare + \blacksquare = 26$ and $\blacklozenge - \blacksquare = 8$. What is $\blacklozenge$? **21**

Why? $\blacksquare = 26 \div 2 = 13$, so $\blacklozenge = 8 + 13$.

2 $\blacktriangle + \blacktriangle = 8$ and $\blacktriangle + \bullet = 9$. What is $\bullet$? _____

Why? _____

3 $\bullet + \bullet = 16$ and $\bullet \times \blacktriangle = 24$. What is $\blacktriangle$? _____

Why? _____

4 $\blacklozenge + \blacklozenge + \blacklozenge = 39$ and $\blacklozenge + \bullet = 21$. What is $\bullet$? _____

Why? _____

5 $\blacktriangle + \blacktriangle = 10$ and $\bullet - \blacktriangle = 19$. What is $\bullet$? _____

Why? _____



Reasoning — Always, sometimes, never



Name: _____

Date: _____

Read each question and write what you work out.

1 The sum of two odd numbers is odd.

☐ always

☐ sometimes

☒ never

Why? Try 13 and 27 — it fails, and so does every other case.

2 Taking away makes a number smaller.

☐ always

☐ sometimes

☐ never

Why?

3 The product of two odd numbers is odd.

☐ always

☐ sometimes

☐ never

Why?

4 If the digits of a number add up to a multiple of 3, the number is a multiple of 3.

☐ always

☐ sometimes

☐ never

Why?

5 An odd number times an even number is odd.

☐ always

☐ sometimes

☐ never

Why?



Reasoning — Number sequences

Name: _____

Date: _____



Read each question and write what you work out.

1 Here are the first four terms of a number sequence. 11 13 15 17

(a) What is the 10th term? **29**

(b) Which term is 43? **17**

2 Here are the first four terms of a number sequence. 10 15 20 25

(a) What is the 8th term? ____

(b) Which term is 90? ____

3 Here are the first four terms of a number sequence. 6 12 18 24

(a) What is the 12th term? ____

(b) Which term is 96? ____

4 Here are the first four terms of a number sequence. 7 11 15 19

(a) What is the 8th term? ____

(b) Which term is 75? ____



Reasoning — Is it always true?

Name: _____

Date: _____



Read each question and write what you work out.

- 1 A number that is a multiple of both 4 and 6 is a multiple of 24.

always

sometimes

never

Why? Try 24 — true. Try 12 — false. One example is not enough.

- 2 A multiple of 4 added to a multiple of 6 gives a multiple of 12.

always

sometimes

never

Why?

- 3 The product of two consecutive numbers is even.

always

sometimes

never

Why?

- 4 The sum of four consecutive numbers is a multiple of 4.

always

sometimes

never

Why?

- 5 The difference between two square numbers in a row is odd.

always

sometimes

never

Why?



Power Pack · Reasoning puzzles — Answer key



Odd one out

1. 24, 34, 11, 3 → 3 (the other three are all two-digit numbers)

2. 36, 3, 21, 2 → 2 (the other three are all multiples of 3)

3. 59, 38, 12, 52 → 59 (the other three are all even)

4. 60, 35, 55, 32 → 32 (the other three are all multiples of 5)

5. 9, 60, 50, 10 → 9 (the other three are all multiples of 10)

Spot the error

1. $56 - 44 = 12$, not 13 (the answer is one out)

2. $42 + 44 = 86$, not 87 (the answer is one out)

3. $41 + 28 = 69$, not 70 (the answer is one out)

4. $60 - 21 = 39$, not 41 (each column took the smaller digit from the larger)

5. $3 \times 6 = 18$, not 9 (the numbers were added instead of multiplied)

Symbol puzzles

1. ■ = 13, ♦ = 21

2. ▲ = 4, ● = 5

3. ● = 8, ▲ = 3

4. ♦ = 13, ● = 8

5. ▲ = 5, ● = 24

Always, sometimes, never

1. The sum of two odd numbers is odd. → never

2. Taking away makes a number smaller. → sometimes

3. The product of two odd numbers is odd. → always

4. If the digits of a number add up to a multiple of 3, the number is a multiple of 3. → always

5. An odd number times an even number is odd. → never

Number sequences

1. 11, 13, 15, 17, ... : 10th term = 29, and 43 is the 17th term

2. 10, 15, 20, 25, ... : 8th term = 45, and 90 is the 17th term

3. 6, 12, 18, 24, ... : 12th term = 72, and 96 is the 16th term

4. 7, 11, 15, 19, ... : 8th term = 35, and 75 is the 18th term

Power Pack · Reasoning puzzles — Answer key



Is it always true?

1. A number that is a multiple of both 4 and 6 is a multiple of 24. → sometimes
2. A multiple of 4 added to a multiple of 6 gives a multiple of 12. → sometimes
3. The product of two consecutive numbers is even. → always
4. The sum of four consecutive numbers is a multiple of 4. → never
5. The difference between two square numbers in a row is odd. → always