Year 4 maths: Symbol number puzzles (Medium)

Maths · Patterns and algebra
Level: Medium

Student: _____ Date: _____

Instructions
- There are 10 questions. Read each one carefully.
- Write your answers on this paper. Use the space under a question to work it out.
- A grown-up can read a question aloud — that's fine.
- The answers are at the end. Check them together when you have finished.

Questions

1. ▲ = 6. Which number sentence is true?

Circle one answer.

○ **A** ▲ + ▲ = 12 ○ **B** ▲ + ▲ is less than 12

○ **C** ▲ + 5 is greater than 11 ○ **D** ▲ + ▲ + ▲ = 16

2. Each symbol stands for a whole number, and the same symbol always means the same number. ● − 7 = 8. What is ● + ●?

Answer: ☐

Working:

3. □ + 7 = 20 − 4. What number goes in the box?

Circle one answer.

○ **A** 13 ○ **B** 16 ○ **C** 9 ○ **D** 23

4. 2 × 15 = 3 × ▲. What number is ▲?

Circle one answer.

○ **A** 30 ○ **B** 27 ○ **C** 5 ○ **D** 10

5. What number must go in the box to make this number sentence true? □ + 26 = 50 + 50

Circle one answer.

○ **A** 24 ○ **B** 74 ○ **C** 100 ○ **D** 126

6. 5 × 12 = 10 × ▲ What number is ▲?

Circle one answer.

○ **A** 600 ○ **B** 60 ○ **C** 6 ○ **D** 50

7. Which three different whole numbers have the same sum and product?

Circle one answer.

○ **A** 2, 3 and 4 ○ **B** 0, 1 and 2 ○ **C** 1, 2 and 4 ○ **D** 1, 2 and 3

8. 1, 2 and 3 add to 6 and multiply to 6. Each number is doubled. What do the new numbers add to?

Circle one answer.

○ **A** 6 ○ **B** 48 ○ **C** 12 ○ **D** 8

9. Write the same whole number in each circle. 4 × ● is smaller than 20. ● + ● is bigger than 4. How many whole numbers make both sentences true?

Circle one answer.

○ **A** 2 ○ **B** 5 ○ **C** 1 ○ **D** 4

10. A sum should be 80 + 25. Ella typed 80 − 25 and got 55. How much too small is her answer?

Circle one answer.

○ **A** 40 ○ **B** 25 ○ **C** 105 ○ **D** 50

Answer key

Year 4 maths: Symbol number puzzles (Medium) · Sheet 595850

1. A — ▲ + ▲ = 12

6 + 6 = 12, so '▲ + ▲ = 12' is true. 12 is not less than 12, 11 is not greater than 11, and 6 + 6 + 6 = 18.

2. 30

● = 8 + 7 = 15. 15 + 15 = 30.

3. C — 9

20 − 4 = 16. □ + 7 = 16, so □ = 16 − 7 = 9. Check: 9 + 7 = 16.

4. D — 10

Left side: 2 × 15 = 30. So 3 × ▲ = 30, and 30 ÷ 3 = 10. Check: 3 × 10 = 30.

5. B — 74

50 + 50 = 100. □ + 26 = 100, so □ = 100 − 26 = 74. Check: 74 + 26 = 100.

6. C — 6

5 × 12 = 60. 10 × ▲ = 60, so ▲ = 60 ÷ 10 = 6.

7. D — 1, 2 and 3

1 + 2 + 3 = 6 and 1 × 2 × 3 = 6. For 1, 2 and 4: sum 7, product 8. For 2, 3 and 4: sum 9, product 24.

8. C — 12

Doubled, the numbers are 2, 4 and 6. 2 + 4 + 6 = 12.

9. A — 2

4 × ● smaller than 20: ● is 4 or less (4 × 5 = 20 is not smaller). ● + ● bigger than 4: ● is 3 or more (2 + 2 = 4 is not bigger). 3 and 4: 2 numbers.

10. D — 50

The right answer is 105. 105 − 55 = 50. That is 25 two times.