

Primary Number System

MCQ Test, Set 04

Time: 30 minutes

Maximum marks: 25

Name: _____ Class: _____ Date: _____

- There are 25 questions. Each has exactly one correct answer: choose A, B, C or D.
- Each correct answer carries 1 mark. There is no negative marking.
- The key sheet and worked solutions are at the end of this test.

- How many natural numbers are there between 25 and 40?
A. 15 **B.** 16 **C.** 13 **D.** 14
- The even numbers between 21 and 29 are
A. 22, 24, 26, 28 **B.** 22, 24, 26 **C.** 20, 22, 24, 26, 28 **D.** 21, 23, 25, 27
- Which of the following is NOT a multiple of 6?
A. 54 **B.** 72 **C.** 64 **D.** 48
- Which of the following is NOT a factor of 70?
A. 20 **B.** 14 **C.** 7 **D.** 10
- The factors of 39 are
A. 3, 13 **B.** 1, 3, 13, 39 **C.** 1, 39 **D.** 1, 3, 13
- In $4m$, the constant is
A. 1 **B.** $4m$ **C.** m **D.** 4
- $9 \times c =$
A. c^9 **B.** 9^c **C.** $9c$ **D.** $9 + c$
- $p + p + p + p + p + p + p + p =$
A. $8 + p$ **B.** $8p$ **C.** p^8 **D.** $7p$
- $3z + 7z + 5z =$
A. $105z$ **B.** $15z^3$ **C.** $14z$ **D.** $15z$
- n^2 means
A. $n + 2$ **B.** $n \times n$ **C.** $n \times n \times n$ **D.** $n + n$
- $91^2 =$
A. 811 **B.** 8281 **C.** 182 **D.** 910

12. The square of 45 is
A. 1625 B. 405 C. 90 D. 2025
-
13. $40^3 =$
A. 64000 B. 120 C. 6400 D. 640000
-
14. Write $9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9$ in exponential form.
A. 9×7 B. 9^7 C. 7^9 D. 9^6
-
15. If $6^\square = 46656$, the number in the box is
A. 7776 B. 6 C. 7 D. 5
-
16. Which of the following numbers between 6000 and 7000 is NOT divisible by 2?
A. 6807 B. 6934 C. 6596 D. 6268
-
17. Which of the following numbers between 5000 and 6000 is NOT divisible by 3?
A. 5276 B. 5430 C. 5910 D. 5298
-
18. Which of the following numbers between 6000 and 7000 is divisible by 3?
A. 6356 B. 6359 C. 6853 D. 6087
-
19. Which of the following numbers between 50000 and 60000 is divisible by 4?
A. 53902 B. 54414 C. 55396 D. 51374
-
20. Which of the following numbers between 7000 and 8000 is divisible by 5?
A. 7606 B. 7702 C. 7909 D. 7380
-
21. Which of the following numbers between 7000 and 8000 is divisible by 6?
A. 7695 B. 7066 C. 7260 D. 7462
-
22. 8397 is not divisible by 6 because
A. it is not divisible by 2 B. it is not divisible by 3
C. its unit digit is not 6 D. it is divisible by neither 2 nor 3
-
23. Which of the following numbers between 400 and 500 is NOT divisible by 7?
A. 469 B. 483 C. 439 D. 406
-
24. To test 399 for divisibility by 7, twice the unit digit is subtracted from the remaining part. The result is
A. 57 B. 30 C. 381 D. 21
-
25. Which of the following numbers between 40000 and 50000 is divisible by all of 2, 3, 4, 5 and 6?
A. 45630 B. 41376 C. 43980 D. 47320
-

Key sheet

1. D	2. A	3. C	4. A	5. B
6. D	7. C	8. B	9. D	10. B
11. B	12. D	13. A	14. B	15. B
16. A	17. A	18. D	19. C	20. D
21. C	22. A	23. C	24. D	25. C

Solutions

1. How many natural numbers are there between 25 and 40?

Leave out 25 and 40: the numbers are 26, 27, ..., 39.

Counting them gives 14.

Ans: (D) 14

2. The even numbers between 21 and 29 are

Even numbers give remainder 0 when divided by 2: 0, 2, 4, 6, ...

Between 21 and 29: 22, 24, 26, 28

Ans: (A) 22, 24, 26, 28

3. Which of the following is NOT a multiple of 6?

$$48 = 6 \times 8, 54 = 6 \times 9, 72 = 6 \times 12$$

$64 = 6 \times 10 + 4$ leaves remainder 4, so it is not a multiple of 6.

Ans: (C) 64

4. Which of the following is NOT a factor of 70?

$$70 = 7 \times 10, 70 = 10 \times 7, 70 = 14 \times 5$$

$70 = 20 \times 3 + 10$ leaves remainder 10, so 20 is not a factor of 70.

Ans: (A) 20

5. The factors of 39 are

$$39 = 1 \times 39$$

$$= 3 \times 13$$

Factors of 39: 1, 3, 13, 39

Ans: (B) 1, 3, 13, 39

6. In $4m$, the constant is

$4m = 4 \times m$; 4 is fixed, m is the variable.

Ans: (D) 4

7. $9 \times c =$

As $2 \times a = 2a$, a number times a letter is written without the $\times$ sign.

$$9 \times c = 9c$$

Ans: (C) $9c$

8. $p + p + p + p + p + p + p + p =$

$p + p + p + p + p + p + p + p$ is p added 8 times.

$$p + p + p + p + p + p + p + p = 8p$$

Ans: (B) $8p$

9. $3z + 7z + 5z =$

$$3z + 7z + 5z = (3 + 7 + 5)z = 15z$$

Ans: (D) $15z$

10. n^2 means

n^2 is n multiplied 2 times: $n \times n$.

Ans: (B) $n \times n$

11. $91^2 =$

$$91^2 = 91 \times 91$$

$$91 \times 1 = 91$$

$$91 \times 9 = 819, \text{ written one place to the left: } 8190$$

$$91 + 8190 = 8281$$

Ans: (B) 8281

12. The square of 45 is

$$45^2 = 45 \times 45$$

$$45 \times 5 = 225$$

$$45 \times 4 = 180, \text{ written one place to the left: } 1800$$

$$225 + 1800 = 2025$$

Ans: (D) 2025

13. $40^3 =$

$$40^3 = 40 \times 40 \times 40$$

$$40 \times 40 = 1600, 1600 \times 40 = 64000$$

$$= 64000$$

Ans: (A) 64000

14. Write $9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9$ in exponential form.

9 is multiplied by itself 7 times, so it is 9^7 .

Ans: (B) 9^7

15. If $6^\square = 46656$, the number in the box is

Divide by 6 again and again:

$$46656 \div 6 = 7776, 7776 \div 6 = 1296, 1296 \div 6 = 216$$

$$216 \div 6 = 36, 36 \div 6 = 6$$

$$46656 = 6 \times 6 \times 6 \times 6 \times 6 \times 6 = 6^6$$

Ans: (B) 6

16. Which of the following numbers between 6000 and 7000 is NOT divisible by 2?

A number is divisible by 2 if the digit at its unit place is 0, 2, 4, 6 or 8.

The digit at the unit place of 6807 is 7, so 6807 is not divisible by 2.

The other three are divisible.

Ans: (A) 6807

17. Which of the following numbers between 5000 and 6000 is NOT divisible by 3?

A number is divisible by 3 if the sum of all its digits is divisible by 3.

Sum of the digits of 5276: $5 + 2 + 7 + 6 = 20$

20 is not divisible by 3 ($20 = 3 \times 6 + 2$), so 5276 is not divisible by 3.

Each of the others passes the test.

Ans: (A) 5276

18. Which of the following numbers between 6000 and 7000 is divisible by 3?

A number is divisible by 3 if the sum of all its digits is divisible by 3.

Sum of the digits of 6087: $6 + 0 + 8 + 7 = 21$

21 is divisible by 3 ($21 = 3 \times 7$), so 6087 is divisible by 3.

Each of the others fails the test.

Ans: (D) 6087

19. Which of the following numbers between 50000 and 60000 is divisible by 4?

A number is divisible by 4 if its last two digits together are divisible by 4.

Last two digits of 55396 together: 96; $96 = 4 \times 24$, so 55396 is divisible by 4.

Each of the others fails the test.

Ans: (C) 55396

20. Which of the following numbers between 7000 and 8000 is divisible by 5?

A number is divisible by 5 if the digit at its unit place is 0 or 5.

The digit at the unit place of 7380 is 0, so 7380 is divisible by 5.

The other three are not divisible.

Ans: (D) 7380

21. Which of the following numbers between 7000 and 8000 is divisible by 6?

A number is divisible by 6 if it is divisible by both 2 and 3.

The digit at the unit place of 7260 is 0, so 7260 is divisible by 2.

Sum of the digits of 7260: $7 + 2 + 6 + 0 = 15$

15 is divisible by 3 ($15 = 3 \times 5$), so 7260 is divisible by 3.

$\therefore$ 7260 is divisible by 6.

Each of the others fails the test.

Ans: (C) 7260

22. 8397 is not divisible by 6 because

A number is divisible by 6 if it is divisible by both 2 and 3.

The digit at the unit place of 8397 is 7, so 8397 is not divisible by 2.

Sum of the digits of 8397: $8 + 3 + 9 + 7 = 27$

27 is divisible by 3 ($27 = 3 \times 9$), so 8397 is divisible by 3.

$\therefore$ 8397 is not divisible by 6.

Ans: (A) it is not divisible by 2

23. Which of the following numbers between 400 and 500 is NOT divisible by 7?

A number is divisible by 7 if the remaining part minus twice the unit digit is a multiple of 7 (or 0).

439: $43 - 9(2) = 43 - 18 = 25$; $25 = 7 \times 3 + 4$, not a multiple of 7, so 439 is not divisible by 7.

Each of the others passes the test.

Ans: (C) 439

24. To test 399 for divisibility by 7, twice the unit digit is subtracted from the remaining part. The result is

Remaining part = 39, unit digit = 9

$39 - 9(2) = 39 - 18 = 21$

Ans: (D) 21

25. Which of the following numbers between 40000 and 50000 is divisible by all of 2, 3, 4, 5 and 6?

43980: unit digit 0 (by 2 and 5); digit sum 24 (by 3, so by 6); last two digits 80 (by 4)

47320 fails the rule for 3, 45630 fails the rule for 4, 41376 fails the rule for 5.

Ans: (C) 43980
