

Primary Number System

MCQ Test, Set 08

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.

1. The natural numbers along with 0 are called

- A.** counting numbers **B.** whole numbers
C. natural numbers **D.** odd numbers

2. The odd numbers between 40 and 48 are

- A.** 41, 43, 45, 47 **B.** 41, 43, 45, 47, 49 **C.** 42, 44, 46 **D.** 41, 43, 45

3. Which of the following is a multiple of 35?

- A.** 265 **B.** 225 **C.** 245 **D.** 255

4. In $144 = 9 \times \square$, the number in the box is

- A.** 18 **B.** 16 **C.** 14 **D.** 135

5. The factors of 57 are

- A.** 1, 3, 19 **B.** 1, 3, 19, 57 **C.** 1, 57 **D.** 3, 19

6. How many variables are there in the list $a, 5, y, 13, z$?

- A.** 5 **B.** 2 **C.** 3 **D.** 1

7. Which of the following equals $8r$?

- A.** r^8 **B.** $8 \times r$ **C.** $8 - r$ **D.** $8 + r$

8. $n + n + n + n + n + n + n + n + n =$

- A.** $9n$ **B.** n^9 **C.** $8n$ **D.** $9 + n$

9. $6m + 6m + 7m =$

- A.** $18m$ **B.** $19m$ **C.** $252m$ **D.** $19m^3$

10. Which of the following is p^3 ?

- A.** $p \times p \times p$ **B.** $p \times p$ **C.** $p + p + p$ **D.** $3 + p$

11. $95 \times 95 =$

- A.** 190 **B.** 9025 **C.** 8125 **D.** 1330

12. $51^2 =$
A. 102 B. 306 C. 2601 D. 251
-
13. 8^6 means
A. $8 \times 8 \times 8 \times 8 \times 8$ B. $6 \times 6 \times 6 \times 6 \times 6 \times 6 \times 6 \times 6$
C. 8×6 D. $8 \times 8 \times 8 \times 8 \times 8 \times 8$
-
14. Write $16 \times 16 \times 16 \times 16 \times 16$ in exponential form.
A. 16^4 B. 16×5 C. 16^5 D. 5^{16}
-
15. If $2^\square = 8192$, the number in the box is
A. 13 B. 12 C. 14 D. 4096
-
16. Which of the following numbers between 9000 and 10000 is NOT divisible by 2?
A. 9556 B. 9748 C. 9640 D. 9001
-
17. Which of the following numbers between 20000 and 30000 is NOT divisible by 3?
A. 23025 B. 28521 C. 23064 D. 21766
-
18. Which of the following numbers between 30000 and 40000 is divisible by 3?
A. 32216 B. 30109 C. 35334 D. 32519
-
19. Which of the following numbers between 90000 and 100000 is divisible by 4?
A. 94830 B. 92858 C. 98912 D. 92174
-
20. Which of the following numbers between 30000 and 40000 is NOT divisible by 5?
A. 32410 B. 31585 C. 39585 D. 30152
-
21. Which of the following numbers between 60000 and 70000 is divisible by 6?
A. 63570 B. 68852 C. 61197 D. 61526
-
22. 76376 is not divisible by 6 because
A. it is not divisible by 3 B. its unit digit is not 6
C. it is divisible by neither 2 nor 3 D. it is not divisible by 2
-
23. Which of the following numbers between 800 and 900 is NOT divisible by 7?
A. 896 B. 854 C. 833 D. 873
-
24. To test 605 for divisibility by 7, twice the unit digit is subtracted from the remaining part. The result is
A. 595 B. 70 C. 50 D. 55
-
25. Which of the following numbers between 80000 and 90000 is divisible by all of 2, 3, 4, 5 and 6?
A. 83780 B. 83490 C. 83916 D. 88320
-

Key sheet

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

Solutions

1. The natural numbers along with 0 are called

Whole numbers are the natural numbers along with 0: 0, 1, 2, 3, ...

Ans: (B) whole numbers

2. The odd numbers between 40 and 48 are

Odd numbers give remainder 1 when divided by 2: 1, 3, 5, 7, ...

Between 40 and 48: 41, 43, 45, 47

Ans: (A) 41, 43, 45, 47

3. Which of the following is a multiple of 35?

$$35 \times 7 = 245$$

225, 255 and 265 leave a remainder when divided by 35.

Ans: (C) 245

4. In $144 = 9 \times \square$, the number in the box is

$$144 \div 9 = 16$$

$$144 = 9 \times 16$$

Ans: (B) 16

5. The factors of 57 are

$$57 = 1 \times 57$$

$$= 3 \times 19$$

Factors of 57: 1, 3, 19, 57

Ans: (B) 1, 3, 19, 57

6. How many variables are there in the list $a, 5, y, 13, z$?

Variables: a, y, z (three).

5 and 13 are constants.

Ans: (C) 3

7. Which of the following equals $8r$?

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

$$\text{So } 8r = 8 \times r.$$

Ans: (B) $8 \times r$

8. $n + n + n + n + n + n + n + n + n =$

$n + n + n + n + n + n + n + n + n$ is n added 9 times.

$$n + n + n + n + n + n + n + n + n = 9n$$

Ans: (A) $9n$

9. $6m + 6m + 7m =$

$$6m + 6m + 7m = (6 + 6 + 7)m = 19m$$

Ans: (B) $19m$

10. Which of the following is p^3 ?

p^3 is p multiplied 3 times; $p + p + p$ is $3p$.

Ans: (A) $p \times p \times p$

11. $95 \times 95 =$

$$95^2 = 95 \times 95$$

$$95 \times 5 = 475$$

$$95 \times 9 = 855, \text{ written one place to the left: } 8550$$

$$475 + 8550 = 9025$$

Ans: (B) 9025

12. $51^2 =$

$$51^2 = 51 \times 51$$

$$51 \times 1 = 51$$

$$51 \times 5 = 255, \text{ written one place to the left: } 2550$$

$$51 + 2550 = 2601$$

Ans: (C) 2601

13. 8^6 means

8^6 is 8 multiplied by itself 6 times.

Ans: (D) $8 \times 8 \times 8 \times 8 \times 8 \times 8$

14. Write $16 \times 16 \times 16 \times 16 \times 16$ in exponential form.

16 is multiplied by itself 5 times, so it is 16^5 .

Ans: (C) 16^5

15. If $2^{\square} = 8192$, the number in the box is

Divide by 2 again and again:

$$8192 \div 2 = 4096, 4096 \div 2 = 2048, 2048 \div 2 = 1024$$

$$1024 \div 2 = 512, 512 \div 2 = 256, 256 \div 2 = 128$$

$$128 \div 2 = 64, 64 \div 2 = 32, 32 \div 2 = 16$$

$$16 \div 2 = 8, 8 \div 2 = 4, 4 \div 2 = 2$$

$$8192 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 2^{13}$$

Ans: (A) 13

16. Which of the following numbers between 9000 and 10000 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 9001 is 1, so 9001 is not divisible by 2.

The other three are divisible.

Ans: (D) 9001

17. Which of the following numbers between 20000 and 30000 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 21766: $2 + 1 + 7 + 6 + 6 = 22$

22 is not divisible by 3 ($22 = 3 \times 7 + 1$), so 21766 is not divisible by 3.

Each of the others passes the test.

Ans: (D) 21766

18. Which of the following numbers between 30000 and 40000 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 35334: $3 + 5 + 3 + 3 + 4 = 18$

18 is divisible by 3 ($18 = 3 \times 6$), so 35334 is divisible by 3.

Each of the others fails the test.

Ans: (C) 35334

19. Which of the following numbers between 90000 and 100000 is divisible by 4?

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

Last two digits of 98912 together: 12; $12 = 4 \times 3$, so 98912 is divisible by 4.

Each of the others fails the test.

Ans: (C) 98912

20. Which of the following numbers between 30000 and 40000 is NOT 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 30152 is 2, so 30152 is not divisible by 5.

The other three are divisible.

Ans: (D) 30152

21. Which of the following numbers between 60000 and 70000 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 63570 is 0, so 63570 is divisible by 2.

Sum of the digits of 63570: $6 + 3 + 5 + 7 + 0 = 21$

21 is divisible by 3 ($21 = 3 \times 7$), so 63570 is divisible by 3.

$\therefore$ 63570 is divisible by 6.

Each of the others fails the test.

Ans: (A) 63570

22. 76376 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 76376 is 6, so 76376 is divisible by 2.

Sum of the digits of 76376: $7 + 6 + 3 + 7 + 6 = 29$

29 is not divisible by 3 ($29 = 3 \times 9 + 2$), so 76376 is not divisible by 3.

$\therefore$ 76376 is not divisible by 6.

Ans: (A) it is not divisible by 3

23. Which of the following numbers between 800 and 900 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).

873: $87 - 3(2) = 87 - 6 = 81$; $81 = 7 \times 11 + 4$, not a multiple of 7, so 873 is not divisible by 7.

Each of the others passes the test.

Ans: (D) 873

24. To test 605 for divisibility by 7, twice the unit digit is subtracted from the remaining part. The result is

Remaining part = 60, unit digit = 5

$60 - 5(2) = 60 - 10 = 50$

Ans: (C) 50

25. Which of the following numbers between 80000 and 90000 is divisible by all of 2, 3, 4, 5 and 6?

88320: unit digit 0 (by 2 and 5); digit sum 21 (by 3, so by 6); last two digits 20 (by 4)

83780 fails the rule for 3, 83490 fails the rule for 4, 83916 fails the rule for 5.

Ans: (D) 88320
