

Primary Number System

MCQ Test, Set 10

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. How many whole numbers are there from 0 to 50?

- A.** 49 **B.** 50 **C.** 52 **D.** 51

2. A number gives remainder 1 when it is divided by 2. The number is

- A.** an even number **B.** a multiple of 2
C. an odd number **D.** divisible by 2

3. The multiples of 5 that are less than 30 are

- A.** 5, 15, 25 **B.** 10, 15, 20, 25 **C.** 5, 10, 15, 20, 25, 30 **D.** 5, 10, 15, 20, 25

4. How many divisors does 45 have?

- A.** 8 **B.** 4 **C.** 5 **D.** 6

5. In $128 = 4 \times \square$, the number in the box is

- A.** 34 **B.** 124 **C.** 32 **D.** 30

6. x, y, z, a, b, c are examples of

- A.** multiples **B.** variables
C. natural numbers **D.** constants

7. In $-t$, the number multiplying t is

- A.** t **B.** -1 **C.** 0 **D.** 1

8. $q + q + q + q + q + q =$

- A.** $6 + q$ **B.** q^6 **C.** $6q$ **D.** $5q$

9. $9b + 4b + 11b =$

- A.** $24b$ **B.** $396b$ **C.** $24b^3$ **D.** $23b$

10. If $y \times y \times y \times y = y^\square$, the number in the box is

- A.** 5 **B.** 2 **C.** 4 **D.** 3

11. $39^2 =$

- A.** 1521 **B.** 468 **C.** 78 **D.** 981

12. The square of 62 is
A. 3844 **B.** 364 **C.** 496 **D.** 124
-
13. $21^3 =$
A. 441 **B.** 9261 **C.** 63 **D.** 194481
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14. Write $20 \times 20 \times 20 \times 20 \times 20 \times 20$ in exponential form.
A. 20×6 **B.** 20^6 **C.** 6^{20} **D.** 20^5
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15. If $21^\square = 441$, the number in the box is
A. 2 **B.** 21 **C.** 1 **D.** 3
-
16. Which of the following numbers between 1000 and 2000 is NOT divisible by 2?
A. 1646 **B.** 1709 **C.** 1842 **D.** 1848
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17. Which of the following numbers between 50000 and 60000 is NOT divisible by 3?
A. 57945 **B.** 57210 **C.** 55611 **D.** 52496
-
18. The largest number less than 8000 that is divisible by 3 is
A. 7997 **B.** 7995 **C.** 7999 **D.** 7998
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19. Which of the following numbers between 1000 and 2000 is divisible by 4?
A. 1022 **B.** 1238 **C.** 1736 **D.** 1494
-
20. Which of the following numbers between 60000 and 70000 is divisible by 5?
A. 62509 **B.** 63801 **C.** 63025 **D.** 67851
-
21. Which of the following numbers between 100000 and 200000 is divisible by 6?
A. 103041 **B.** 182394 **C.** 194818 **D.** 100226
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22. Which of the following numbers between 200000 and 300000 is NOT divisible by 6?
A. 282063 **B.** 284208 **C.** 206004 **D.** 220800
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23. Which of the following numbers between 1000 and 2000 is NOT divisible by 7?
A. 1002 **B.** 1127 **C.** 1043 **D.** 1064
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24. To test 343 for divisibility by 7, twice the unit digit is subtracted from the remaining part. The result is
A. 337 **B.** 28 **C.** 40 **D.** 31
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25. Which of the following numbers between 1000 and 2000 is divisible by all of 2, 3, 4, 5 and 6?
A. 1296 **B.** 1650 **C.** 1040 **D.** 1080
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Key sheet

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

Solutions

1. How many whole numbers are there from 0 to 50?

From 0 to 50: 0, 1, 2, ..., 50.

50 natural numbers and 0: 51 whole numbers.

Ans: (D) 51

2. A number gives remainder 1 when it is divided by 2. The number is

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

Ans: (C) an odd number

3. The multiples of 5 that are less than 30 are

$5 \times 1 = 5$, $5 \times 2 = 10$, $5 \times 3 = 15$, $5 \times 4 = 20$, $5 \times 5 = 25$

$5 \times 6 = 30$ is not less than 30.

Ans: (D) 5, 10, 15, 20, 25

4. How many divisors does 45 have?

$$45 = 1 \times 45$$

$$= 3 \times 15$$

$$= 5 \times 9$$

Divisors: 1, 3, 5, 9, 15, 45, so there are 6.

Ans: (D) 6

5. In $128 = 4 \times \square$, the number in the box is

$$128 \div 4 = 32$$

$$128 = 4 \times 32$$

Ans: (C) 32

6. x, y, z, a, b, c are examples of

A symbol which takes various numerical values is called a variable (or) literal.

Ans: (B) variables

7. In $-t$, the number multiplying t is

$$\text{As } -1 \times a = -a, -t = -1 \times t.$$

Ans: (B) -1

8. $q + q + q + q + q + q =$

$q + q + q + q + q + q$ is q added 6 times.

$$q + q + q + q + q + q = 6q$$

Ans: (C) $6q$

9. $9b + 4b + 11b =$

$$9b + 4b + 11b = (9 + 4 + 11)b = 24b$$

Ans: (A) $24b$

10. If $y \times y \times y \times y = y^{\square}$, the number in the box is
 y is multiplied 4 times, so it is y^4 .

Ans: (C) 4

11. $39^2 =$

$$39^2 = 39 \times 39$$

$$39 \times 9 = 351$$

$$39 \times 3 = 117, \text{ written one place to the left: } 1170$$

$$351 + 1170 = 1521$$

Ans: (A) 1521

12. The square of 62 is

$$62^2 = 62 \times 62$$

$$62 \times 2 = 124$$

$$62 \times 6 = 372, \text{ written one place to the left: } 3720$$

$$124 + 3720 = 3844$$

Ans: (A) 3844

13. $21^3 =$

$$21^3 = 21 \times 21 \times 21$$

$$21 \times 21 = 441, 441 \times 21 = 9261$$

$$= 9261$$

Ans: (B) 9261

14. Write $20 \times 20 \times 20 \times 20 \times 20 \times 20$ in exponential form.

20 is multiplied by itself 6 times, so it is 20^6 .

Ans: (B) 20^6

15. If $21^{\square} = 441$, the number in the box is

Divide by 21 again and again:

$$441 \div 21 = 21$$

$$441 = 21 \times 21 = 21^2$$

Ans: (A) 2

16. Which of the following numbers between 1000 and 2000 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 1709 is 9, so 1709 is not divisible by 2.

The other three are divisible.

Ans: (B) 1709

17. Which of the following numbers between 50000 and 60000 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 52496: $5 + 2 + 4 + 9 + 6 = 26$

26 is not divisible by 3 ($26 = 3 \times 8 + 2$), so 52496 is not divisible by 3.

Each of the others passes the test.

Ans: (D) 52496

18. The largest number less than 8000 that is divisible by 3 is

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

7999: digit sum 34, not divisible by 3

7998: digit sum 33, divisible by 3

Ans: (D) 7998

19. Which of the following numbers between 1000 and 2000 is divisible by 4?

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

Last two digits of 1736 together: 36; $36 = 4 \times 9$, so 1736 is divisible by 4.

Each of the others fails the test.

Ans: (C) 1736

20. Which of the following numbers between 60000 and 70000 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 63025 is 5, so 63025 is divisible by 5.

The other three are not divisible.

Ans: (C) 63025

21. Which of the following numbers between 100000 and 200000 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 182394 is 4, so 182394 is divisible by 2.

Sum of the digits of 182394: $1 + 8 + 2 + 3 + 9 + 4 = 27$

27 is divisible by 3 ($27 = 3 \times 9$), so 182394 is divisible by 3.

$\therefore$ 182394 is divisible by 6.

Each of the others fails the test.

Ans: (B) 182394

22. Which of the following numbers between 200000 and 300000 is NOT 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 282063 is 3, so 282063 is not divisible by 2.

Sum of the digits of 282063: $2 + 8 + 2 + 0 + 6 + 3 = 21$

21 is divisible by 3 ($21 = 3 \times 7$), so 282063 is divisible by 3.

$\therefore$ 282063 is not divisible by 6.

Each of the others passes the test.

Ans: (A) 282063

23. Which of the following numbers between 1000 and 2000 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).

1002: $100 - 2(2) = 100 - 4 = 96$; $96 = 7 \times 13 + 5$, not a multiple of 7, so 1002 is not divisible by 7.

Each of the others passes the test.

Ans: (A) 1002

24. To test 343 for divisibility by 7, twice the unit digit is subtracted from the remaining part. The result is

Remaining part = 34, unit digit = 3

$34 - 3(2) = 34 - 6 = 28$

Ans: (B) 28

25. Which of the following numbers between 1000 and 2000 is divisible by all of 2, 3, 4, 5 and 6?

1080: unit digit 0 (by 2 and 5); digit sum 9 (by 3, so by 6); last two digits 80 (by 4)

1040 fails the rule for 3, 1650 fails the rule for 4, 1296 fails the rule for 5.

Ans: (D) 1080
