

Q1. State True or False:

- a. All twin primes are co-primes. _____
- b. All consecutive numbers are co-primes. _____
- c. The smallest prime number is 1. _____
- d. All even numbers are divisible by 2, and hence are composite numbers. _____

Q2. Find the smallest and the greatest 4-digit number, which is divisible by 15.

Smallest Number: _____

Greatest Number: _____

Q3. Find the smallest and the greatest 4-digit number that can be formed using the digits 0, 1, 8 and 9, such that the number is divisible by 11. (Digits should not be repeated.)

Smallest Number: _____

Greatest Number: _____

Q4. Write the prime factors of 2520 in exponential form.

Answer: $2520 =$ _____

Q5. State True or False:

- a. If a number is divisible by both 3 and 7, it will be divisible by 21 also. _____
- b. If 32 is divisible by 16, it will be divisible by all the multiples of 16. _____
- c. If 792 is divisible by 8 and 9, it will be divisible by their product also. _____
- d. If a number is divisible by both 8 and 12, it will be divisible by 96 also. _____

Q6. A number is divisible by 8 and 10. Can you say that the number is divisible by 80? Give reasons in support of your answer.

Answer: _____

Q7. Find whether the following numbers are multiples of 2, 3, 4, 5, 6, 7 and 11. Write Yes in the table, if the given number is a multiple:

Number	Divi- sible by 2	Divi- sible by 3	Divi- sible by 4	Divi- sible by 5	Divi- sible by 6	Divi- sible by 7	Divi- sible by 11
979							
504							
4950							

Q8. Find the smallest number, which should be added to 28913, to make it divisible by 3 and 9.

Answer: _____

Q9. The prime factorisation of a number x is:

$$x = 2^1 \times 3^2 \times 5^0 \times 7^1 \times 11^0 \times 13^2$$

Answer the following question in Yes or No:

- a. Is x completely divisible by 77? _____
- b. Is 21 a factor of x ? _____
- c. Is x a multiple of 18? _____
- d. Is x an even number? _____

Q10. A number is divisible by 10 and 18. Find the other factors of the number.

The other factors are: _____

Answers

1. a. True; b. True; c. False; d. False
2. Smallest Number: 1005; Greatest Number: 9990
3. Smallest Number: 1089; Greatest Number: 9801
4. $2^3 \times 3^2 \times 5^1 \times 7^1$
5. a. True; b. False; c. True; d. False
6. No, 8 and 10 are not co-primes.
E.g.: 40 is divisible by both 8 and 10, but not divisible by 80.

7.

Number	Divi- sible by 2	Divi- sible by 3	Divi- sible by 4	Divi- sible by 5	Divi- sible by 6	Divi- sible by 7	Divi- sible by 11
979	—	—	—	—	—	—	Yes
504	Yes	Yes	Yes	—	Yes	Yes	—
4950	Yes	Yes	—	Yes	Yes	—	Yes

8. 4
9. a. No; b. Yes; c. Yes; d. Yes
10. 1, 2, 3, 5, 6, 9