Number Properties: Hard Practice Paper 7

Q1. What is the highest common factor (HCF) of 132 and 198?

A. 11 *B.* 22 *C.* 33 *D.* 66 *E.* 99

Q2. What is the lowest common multiple (LCM) of 9, 12 and 15?

A. 45 *B.* 60 *C.* 90 *D.* 180 *E.* 540

Q3. A number less than 50 has exactly 9 factors. What is the number?

A. 30 *B.* 36 *C.* 40 *D.* 44 *E.* 48

Q4. How many prime numbers are there between 100 and 120?

A. 3 *B.* 4 *C.* 5 *D.* 6 *E.* 8

Q5. The table shows four numbers written as products of primes. Which two of them have a highest common factor of 12?

Number	Prime factors
A	2 × 2 × 3 × 5
B	2 × 2 × 3 × 3
C	2 × 3 × 5
D	2 × 2 × 2 × 7

A. A and B *B.* A and C *C.* B and C *D.* A and D *E.* C and D

Q6. What is the smallest number that must be subtracted from 1,000 to leave a multiple of 13?

A. 8 *B.* 10 *C.* 12 *D.* 14 *E.* 25

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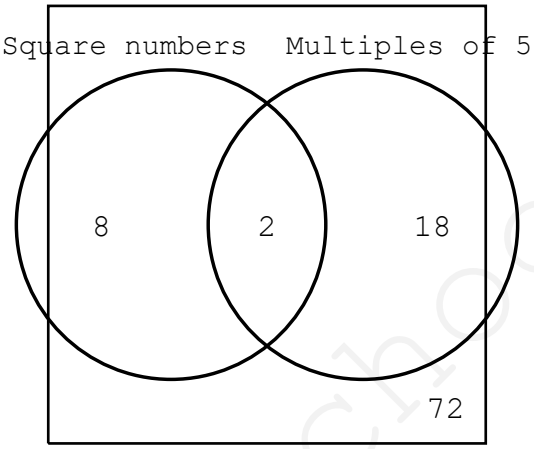
Q7. What is the square root of 2,500 added to the square root of 900?

A. 60 *B.* 70 *C.* 80 *D.* 90 *E.* 130

Q8. The Venn diagram sorts the numbers from 1 to 100. How many of them are square numbers but NOT multiples of 5?



A. 2 *B.* 6 *C.* 8 *D.* 10 *E.* 18

Q9. Why is the number 1 NOT counted as a prime number?

A. It is an odd number

B. It is a square number

C. It is smaller than 2

D. It divides into every other number

E. It has only one factor

Q10. Two numbers are both less than 50. Their highest common factor is 7 and their lowest common multiple is 84. What is the larger number?

A. 12 *B.* 21 *C.* 28 *D.* 42 *E.* 84

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Q11. What is the sum of the prime numbers between 30 and 40?

A. 31 *B.* 37 *C.* 68 *D.* 99 *E.* 105

Q12. A pile of counters can be arranged in equal rows of 6, of 8 or of 9, with none left over each time. What is the smallest possible number of counters?

A. 36 *B.* 48 *C.* 54 *D.* 72 *E.* 144

Q13. Which of these is a cube number?

A. 128 *B.* 180 *C.* 216 *D.* 225 *E.* 400

Q14. A number between 200 and 250 has 3 and 5 as its only prime factors. What is the number?

A. 210 *B.* 216 *C.* 225 *D.* 240 *E.* 245

Q15. Three consecutive whole numbers add up to 87. What is the largest of them?

A. 28 *B.* 29 *C.* 30 *D.* 31 *E.* 32

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