GRE Prep

Numbers

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Numbers

Numbers

1. If p and q are both positive odd integers, which of the following must be odd? Indicate all possible values.

   A. pq

   B. 2pq

   C. 3pq

   D. $pq + p^q$

   E. $p^q + q^p$

Numbers

2. If w is a negative integer, which of the following must be positive? Indicate <u>all</u> such values.

   A. -3w

   B. 2w+10

   C. w^4

   D. w^0

   E. -w+0.5

Numbers

3. How many positive factors of 1080 are perfect squares?

A. 4

B. 6

C. 5

D. 8

E. 10

Numbers

4. Which of the following is a terminating decimal, when expressed in decimals?

A. 19/91

B. 17/225

C. 12/231

D. 41/256

E. 35/324

Numbers

5. Which of the following could be the units digit of $25^n - 19^n$ where n is a positive integer? Indicate all such digits.

A. 0

B. 1

C. 2

D. 3

E. 4

F. 5

G. 6

H. 7

I. 8

J. 9

Numbers

6. If x is a positive integer such that the units digit of x^3 is 3, what is the units digit of x^{15} ?

A. 1

B. 3

C. 5

D. 7

E. 9

Numbers

7. The difference between a two-digit number and the number obtained by interchanging the positions of its digits is 36. What is the difference between the two digits of that number?

A. 3

B. 4

C. 5

D. 9

E. 10

Numbers

8. If N is an integer divisible by 6 but not by 4, then which of the following CANNOT be an integer?

A. $\frac{N}{2}$

B. $\frac{N}{3}$

C. $\frac{N}{6}$

D. $\frac{N}{12}$

E. $\frac{N}{15}$

Numbers

9. If a number when divided by 24 leaves a remainder of 21, then it must be definitely divisible by which of the following?

A. 3

B. 4

C. 5

D. 6

E. 7

Numbers

10. The sum of five consecutive integers is 100. What is the smallest number?

Numbers

11. p is a single-digit positive integer such that the decimal number $4.pp6$ when rounded to the nearest tenth is less than 4.6.

Quantity A	**Quantity B**
p	4

Numbers

12. 2^{10} is a factor of 40^n

Quantity A	Quantity B
n	3

Numbers

13. The price of a strawberry, an orange, and a watermelon is $2, $5, and $6 respectively and Jane spent $P, $2P, and $4P respectively on the three kinds of fruits.

Quantity A	Quantity B
The remainder when an integer P is divided by 30	0

Numbers

14. $\frac{x^2}{18}$ is an integer

Quantity A	Quantity B
The minimum positive value of x	3

Numbers

15. When a positive integer k is divided by 5, the remainder is 3 and when k is divided by 4, the remainder is 0.

Quantity A	Quantity B
The smallest possible value of k	20

Numbers

16. 2x + y is even and $\frac{x}{y}$ is even, where x and y are positive integers.

Quantity A	Quantity B
The smallest possible of x	2

Numbers

17.

Quantity A	Quantity B
Units place of (53323)(70722)(9993)	2

Numbers

18. A bakery sells two types of cakes: chocolate cake and vanilla cake. The chocolate cake is sold every 4 minutes, while the vanilla cake is sold every 5 minutes. If the bakery starts selling both cakes at 10.30 am on a particular day, which of the following would be the time when the bakery has sold both cakes together? Indicate all such times.

A. 11.00 am

B. 12.10 pm

C. 12.55 pm

D. 01.15 pm

E. 02.30 pm

F. 03.50 pm

Numbers

19. If Z is a positive integer and Z^2 is a multiple of 12, then which of the following must be an integer? Indicate all such expressions.

A. $\frac{Z}{8}$

B. $\frac{3Z}{5}$

C. $\frac{Z}{6}$

D. $\frac{3Z}{4}$

E. $\frac{2Z}{3}$

F. $\frac{Z}{9}$

Numbers

20. If $X = \frac{30!}{10!}$, then which of the following must be a prime factor of X? Indicate <u>all</u> such values.

A. 2

B. 5

C. 13

D. 19

E. 23

F. 31

Thank you