

GMAT Prep

Numbers



Numbers

1. If p and q are both positive odd integers, which of the following must be odd?
- A. $(p + 1)q$
 - B. $2pq$
 - C. $3pq$
 - D. $pq + p^q$
 - E. $p^q + q^p$



Numbers

2. How many non-prime integers that lie between 0 and 20 leave either 1 or 2 as remainders when divided by 6?
- A. 1
 - B. 2
 - C. 3
 - D. 4
 - E. 5



Numbers

3. What is the total number of positive factors of 1080?
- A. 16
 - B. 24
 - C. 30
 - D. 32
 - E. 64



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 unit digit of $25^n - 19^n$ where n is a positive integer?
- A. 5
 - B. 6
 - C. 7
 - D. 8
 - E. 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 divisible by which of the following?
- A. 3
 - B. 4
 - C. 5
 - D. 6
 - E. 7



Numbers

10. If P and Q are positive integers that have remainders of 2 and 5, respectively, when divided by 8, which of the following can NOT be a possible value of $P + Q$?
- A. 7
 - B. 15
 - C. 20
 - D. 31
 - E. 63



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. What is the greatest possible value of p ?
- A. 4
 - B. 5
 - C. 6
 - D. 7
 - E. 8



Numbers

12. X is the product of integers from 1 to 15, inclusive. If 2^N is a factor of X , what is the greatest possible value of N ?
- A. 6
 - B. 8
 - C. 10
 - D. 11
 - E. 12



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. What is the remainder when an integer P is divided by 30?
- A. 0
 - B. 1
 - C. 2
 - D. 3
 - E. 4



Numbers

14. If $\frac{x^2}{48}$ is an integer, what is the minimum positive value of x ?

- A. 6
- B. 12
- C. 16
- D. 24
- E. 48



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. What is the number of possible values of k are there between 0 and 100?
- A. 1
 - B. 2
 - C. 3
 - D. 4
 - E. 5



Numbers

16. $2x + y$ is even and $\frac{x}{y}$ is even, where x and y are positive integers. What is the smallest possible of x ?
- A. 2
 - B. 3
 - C. 4
 - D. 6
 - E. 8



Numbers

17. What is the unit's place of $(533^{23})(707^{22})(999^3)$?

- A. 1
- B. 3
- C. 6
- D. 7
- E. 9



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?

- A. 11.00 am
- B. 12.20 pm
- C. 12.55 pm
- D. 01.15 pm
- E. 02.30 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?

- A. $\frac{Z}{8}$
- B. $\frac{3Z}{5}$
- C. $\frac{Z}{6}$
- D. $\frac{3Z}{4}$
- E. $\frac{Z}{9}$



Numbers

20. If $X = \frac{30!}{10!}$, then which of the following must not be a prime factor of X ?

A. 2

B. 5

C. 13

D. 19

E. 31





Thank you