

Question 1

What is the product of all the solutions of of the equation $x + \frac{10}{x - 4} = -1$?

Select one:

- a. -6
 - b. -5
 - c. 6
 - d. 1
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Question 2

In certain village, the ratio between adult men and adult women is 5 : 3 and the ratio between adult men and children is 7 : 2. What is the ratio between adults (men and women) and children?

Select one:

- a. 15 : 7
- b. 28 : 5
- c. 28 : 1
- d. 5 : 1

Question 3

What is the unit digit of the number $324^3 + 324^0 + 324^2 + 324^5$?

Select one:

- a. 3
 - b. 5
 - c. 4
 - d. 6
-

Question 4

Five positive real numbers x, y, z, u and v are such that $xy = 2, yz = 3, zu = 4, uv = 5$. What is the value v/x ?

Select one:

- a. $\frac{3}{2}$
- b. $\frac{15}{8}$
- c. $\frac{5}{6}$
- d. $\frac{4}{5}$

Question 5

The perimeter of two similar triangles ABC and KLM are 18 cm and 12 cm, respectively. The length of the line segment KL is 6 cm. What is the length of the line segment AB ?

Select one:

- a. 9 cm
 - b. 18 cm
 - c. 12 cm
 - d. 4 cm
-

Question 6

The sum of three consecutive integers is 15^{2020} . What is the middle number?

Select one:

- a. $5 \cdot 15^{2019}$
- b. 3^{2020}
- c. 5^{2020}
- d. $15 \cdot 5^{2019}$

Question 7

If the price of an article is first decreased by 30 % and then increased by 20 %, then the net change in the price of the article will be:

Select one:

- a. 10 % decrease
 - b. 10 % increase
 - c. 4 % decrease
 - d. 16 % decrease
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Question 8

The number $8^{2020} + 8^{2021} + 8^{2022} + 8^{2023}$ is divisible by

Select one:

- a. 11
- b. 3
- c. 17
- d. 7

Question 9

We are given a regular hexagon $ABCDEF$. The area of the quadrilateral $BCEF$ is 4 cm^2 . What is the area of the given hexagon in square centimetres?

Select one:

- a. 8
 - b. $6\sqrt{2}$
 - c. 6
 - d. 5
-

Question 10

How many different positive odd integers can be formed using the digits 3, 5, 6 and 7 in which repetition of digits is not allowed?

Select one:

- a. 36
- b. 48
- c. 18
- d. 24

Correct answers:

- 1 C
- 2 B
- 3 B
- 4 B
- 5 A
- 6 D
- 7 D
- 8 B
- 9 C
- 10 B