

GRE Algebra Practice Test 8

Question 1

Which of the following is a multiple of 9^2 ?

Possible Answers:

315

264

945

324

1350



Correct answer:

324

Question 2

Simplify the following:

$$\frac{25^{44} - 5^{86}}{12}$$

Possible Answers:

$$2 * 5^{86}$$

$$2 * 5^{23}$$

$$\frac{4}{5^2}$$

$$\frac{25^2}{24}$$

$$12 * 5^2$$



Correct answer:

$$2 * 5^{86}$$

Question 3

Quantitative Comparison

Quantity A: $4^5 * 4^{-3}$

Quantity B: $\frac{4^5}{4^{-3}}$

Possible Answers:

The relationship cannot be determined from the information given.

Quantity A is greater.

The two quantities are equal.

Quantity B is greater.



Correct answer:

Quantity B is greater.

Question 4

If m and n are both rational numbers and $4^m = 8^n$, what is $\frac{m}{n}$?

Possible Answers:

$$\frac{5}{3}$$

$$\frac{4}{1}$$

$$\frac{3}{2}$$

$$\frac{2}{1}$$



Correct answer:

$$\frac{3}{2}$$

Question 5

find x

$$8^x = 2^{x+6}$$

Possible Answers:

2 or -1

-1

4

3

2



Correct answer:

3

Question 6

Compare 3^6 and 27^2 .

Possible Answers:

The relationship cannot be determined from the information given.

$$3^6 < 27^2$$

$$3^6 > 27^2$$

$$3^6 = 27^2$$



Correct answer:

$$3^6 = 27^2$$

Question 7

Solve for x .

$$2^x = 32$$

Possible Answers:

8

4

5

6

7



Correct answer:

5

Question 8

Solve for x .

$$3^x = \frac{1}{9}$$

Possible Answers:

-2

3

$-\frac{1}{2}$

$\frac{1}{2}$

2



Correct answer:

-2

Question 9

Solve for x .

$$\frac{1}{4} = 256^x$$

Possible Answers:

$$\frac{1}{4}$$

$$-\frac{1}{4}$$

256

4

-4



Correct answer:

-4

Question 10

Solve for x .

$$2^{x+1} = 128$$

Possible Answers:

7

6

5

9

8



Correct answer:

6