GRE Algebra Practice Test 9

Question 1

If one mile is equal to 5,280 feet, how many feet are 100 miles equal to in scientific notation?

Possible Answers:

528×10^3

$528,000$

$.528 \times 10^6$

5.28×10^5

5280×10^2

Correct answer:

5.28×10^5

Question 2

$0.0075 \cdot 0.0126 = ?$

Possible Answers:

$0.945 \cdot 10^{-5}$

0.000945

$9.45 \cdot 10^{-5}$

$9.45 \cdot 10^{-6}$

Correct answer:

$9.45 \cdot 10^{-5}$

Question 3

A five-year bond is opened with $\$5000$ in it and an interest rate of 2.5%, compounded annually. This account is allowed to compound for five years. Which of the following most closely approximates the total amount in the account after that period of time?

Possible Answers:

$\$5811$

$\$6143$

$\$5657$

$\$5518$

$\$5625$

Question 4

Jack has $\$15,000$ to invest. If he invests two-thirds of it into a high-yield savings account with an annual interest rate of 8%, compounded quarterly, and the other third in a regular savings account at 6% simple interest, how much does Jack earn after one year?

Possible Answers:

$1124.32

$1081.98

$901.43

$1128.75

$1051.32

Correct answer:

$1124.32

Question 5

If a cash deposit account is opened with $\$7500$ for a three year period at 3.5% interest compounded once annually, which of the following is closest to the positive difference between the interest accrued in the third year and the interest accrued in the second year?

Possible Answers:

$0

$281.2

$11.41

$9.51

$81.41

Correct answer:

$9.51

Question 6

Quantitative Comparison

Quantity A: x^2

Quantity B: x^3

Possible Answers:

- Quantity A is greater.
- The relationship cannot be determined from the information given.
- The two quantities are equal.
- Quantity B is greater.

Correct answer:

The relationship cannot be determined from the information given.

Question 7

If $x^7y^8z^{10} < 0$, then which of the following must also be true?

Possible Answers:

$x < 0$

$yz < 0$

$zx > 0$

$zy > 0$

$y < 0$

Correct answer:

$x < 0$

Question 8

Which quantity is the greatest?

Quantity A

7^{-5}

Quantity B

49^{-3}

Possible Answers:

The realationship cannot be determined from the information given.

The two quantities are equal.

Quantity B is greater.

Quantity A is greater.

Correct answer:

Quantity A is greater.

Question 9

Simplify the following:

$$\frac{48^{50} + 80^{30}}{4^{20}}$$

Possible Answers:

$2^{160} * 3^{50} + 2^{80} * 5^{30}$

17^{50}

$12^{30} + 5^{10}$

17^{80}

$4^{16} * 3^{25} + 2^{20} * 5^{15}$

Correct answer:

$2^{160} * 3^{50} + 2^{80} * 5^{30}$

Question 10

What digit appears in the units place when 2^{102} is multiplied out?

Possible Answers:

4

2

8

6

0

Correct answer:

4