GRE Arithmetic Practice Paper 1

Question 1

Neither x nor y is equal to 0.

$xy = 4y/x$

Quantity A: x

Quantity B: 2

Possible Answers:

Quantity B is greater.

The relationship cannot be determined from the information given.

The two quantities are equal.

Quantity A is greater.

Question 2

Quantity A: 9

Quantity B: $\sqrt{(25 + 55)}$

Possible Answers:

Quantity B is greater.

The relationship cannot be determined from the information given.

Quantity A is greater.

The two quantities are equal.

Question 3

Simplify:

$\sqrt[3]{24,300}$

Possible Answers:

- $10\sqrt[3]{243}$
- $900\sqrt[3]{3}$
- $90\sqrt[3]{270}$
- $9\sqrt[3]{300}$
- $90\sqrt[3]{3}$

Question 4

$\sqrt{180}+\sqrt{125}=?$

Possible Answers:

- $11\sqrt{10}$
- 17.5
- $\sqrt{305}$
- $11\sqrt{5}$
- 25.0

Question 5

Simplify.

$\sqrt{624}$

Possible Answers:

- $16\sqrt{39}$
- $8\sqrt{39}$
- $2\sqrt{39}$
- $\sqrt{39}$
- $4\sqrt{39}$

Question 6

Reduce $\sqrt{400}$ to its simplest form.

Possible Answers:

- $2\sqrt{20}$
- $\sqrt{20}$
- $4\sqrt{2}$
- $\sqrt{200}$
- 20

Question 7

Simplify.

$\sqrt{720}$

Possible Answers:

- $5\sqrt{144}$
- $\sqrt{12}$
- $\sqrt{720}$
- $144\sqrt{5}$
- $12\sqrt{5}$

Question 8

Find the square root of $1,800$.

Possible Answers:

- 900
- 60
- $2\sqrt{60}$
- $\sqrt{32}$
- $30\sqrt{2}$

Question 9

Simplify.

$\sqrt{54}$

Possible Answers:

$3\sqrt{6}$

$6\sqrt{6}$

$2\sqrt{6}$

$\sqrt{3}$

$9\sqrt{6}$

Question 10

The average (arithmetic mean) high temperature for *x* days is 70 degrees. The addition of one day with a high temperature of 75 degrees increases the average to 71 degrees.

Quantity A	**Quantity B**
x	5

(A) Quantity A is greater.
(B) Quantity B is greater.
(C) The two quantities are equal.
(D) The relationship cannot be determined from the information given.

Question 11

a and *b* are integers.

$a^2 = b^3$

Quantity A	**Quantity B**
a	*b*

(A) Quantity A is greater.
(B) Quantity B is greater.
(C) The two quantities are equal.
(D) The relationship cannot be determined from the information given.

Question 12

A certain pet store sells only dogs and cats. In March, the store sold twice as many dogs as cats. In April, the store sold twice the number of dogs that it sold in March, and three times the number of cats that it sold in March. If the total number of pets the store sold in March and April combined was 500, how many dogs did the store sell in March?

(A) 80
(B) 100
(C) 120
(D) 160
(E) 180

Question 13

Which two of the following numbers have a product that is between −1 and 0?

1. -20
2. -10
3. 2^-4
4. 3^-2

Question 14

Each month, Renaldo earns a commission of 10.5% of his total sales for the month, plus a salary of $2,500. If Renaldo earns $3,025 in a certain month, what were his total sales?

Question 15

At a recent dog show, there were 5 finalists. One of the finalists was awarded "Best in Show" and another finalist was awarded "Honorable Mention." In how many different ways could the two awards be given out?

Question 16

If the ratio of the ages of two friends A and B is 3 : 5 and that of B and C is 3 : 5 and the sum of the ages of all 3 friends is 147, how old is B?

A. 15 Years
B. 75 Years
C. 49 Years
D. 45 Years
E. 27 Years

Question 17

In a certain year, California extracted

2

7

27th and Texas extracted

1

7

17th of all the Uranium ore extracted in the United States. If all the other states combined extracted 28 million tons that year, how many million tons did Texas extract that year?

A. 12
B. 7
C. 14
D. 5
E. 8

Question 18

N is the smallest positive integer that has 7 factors.

Column A	Column B
Number of factors of √N	Number of factors of (N - 2)

A. Column A is greater
B. Column B is greater
C. The two columns are equal
D. Cannot be determined

Question 19

How many pairs of natural numbers whose HCF is 12 add up to 216?

A. 6
B. 3
C. 9
D. 18
E. 17

Question 20

Set A comprises all 3-digit numbers that are multiples of 6. Set B comprises all 3-digit numbers that are multiples of 4 but are not multiples of 8. How many elements does (A ∪ B) comprise?

A. 224
B. 225

C. 263
D. 265
E. 300