GRE QUANT PRACTICE PAPER

1. Simplify:
   $x^2y - 5x^2y^2x^2y$

select

$1 - 5x$

select

None of the other answers

select

$y - 5y$

select

$5 + x^2y^2$

select

$1 - 5y$

2. A function $f(x) = -1$ for all values of x. Another function $g(x) = 3x$ for all values of x. What is $g(f(x))$ when $x = 4$?

select

-3

select

3

select

12

select

-12

select

-1

3. $25x^2 - 36y^2$ can be factored into:

select

cannot be factored

select

$(5x + 6y)(5x + 6y)$

select

$(5x - 6y)(5x - 6y)$

select

$(5x - 6y)(5x + 6y)$

select

$5 * 6 * (x^2 - y^2)$

4. If $-1 < w < 1$, all of the following must also be greater than -1 and less than 1 EXCEPT for which choice?

select

w^2

select

$3w/2$

select

$|w|$

select

$w/2$

select

$|w|^{0.5}$

5. In the equation below, m, p, and k are non-zero numbers. What is the value of m in terms of p and k?

$1m^3 - 1k^2 = 1p$

select

$m = (pk^2p + k^2)^{13}$

select

$m = (p + k^22)^3$

select

$m = p^2k^3p + k^2$

select

$m = p^{12} - k^{13}$

select

$m = (p + k^2pk^2)^{13}$

For the quantities below, x<y and x and y are both integers.

6. Please elect the answer that describes the relationship between the two quantities below:
Quantity A

x^5y^3

Quantity B
x^4y^4

select

Quantity B is greater.

select

Quantity A is greater.

select

The relationship cannot be determined from the information provided.

select

The quantities are equal.

7. Solve the inequality $6(x-1)<7(3-x)$.

select

$x<127$

select

$x>1327$

select

$x>-1117$

select

$x<2713$

select

$x>-1327$

8. $h(x)=28x+4$

For which of the following values of x is the above function undefined?

select

4

select

28

select

None of the other answers

select

-4

select

0

9. If $4xs = v$, $v = ks$, *and* $sv \neq 0$, which of the following is equal to k ?

select

$4xv$

select

x

select

$4x$

select

$2xv$

select

xv

10. $3x^2 - 11x = -10$

Which of the following is a valid value for x?

select

-2

select

5 / 3

select

3

select

-5 / 3

select

None of the other answers

11. Evaluate:

$y = 3^{13} - 9^5 (127)^{-3}$

select

24

select

30

select

27

select

81

select

78

12. Solve for x.

$2^{x+1}=128$

select

6

select

8

select

7

select

5

select

9

13. $0.0075 \cdot 0.0126 = ?$

select

0.000945

select

$9.45 \cdot 10^{-5}$

select

$9.45 \cdot 10^{-6}$

select

$0.945 \cdot 10^{-5}$

14. 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?

select

$5518

select

$5657

select

$5811

select

$5625

select

$6143

In a four-digit positive interger y, the thousand's digit is three times the units digit.

15.

Quantitiy A	Quantitiy B
Unit's digit of y	4

select

Quantity B is greater.

select

The relationship cannot be determined from the information given.

select

The two quantities are equal.

select

Quantity A is greater.