GRE QUANT PRACTICE PAPER

1. **Reduce the following fraction**

$$\frac{a^2b^3c + ab^2c^2}{5a^2b}$$

select	$\dfrac{bc(ab+c)}{5a}$
select	$\dfrac{ac(ab+c)}{5b}$
select	$\dfrac{ab(ab+c)}{5c}$
select	$\dfrac{5ab(ab+c)}{c}$

1.

2. **If $5x = 55$, $x + y = 23$, and $y - z = 2$, find the value of $\dfrac{2x+y}{z}$.**

select	$\dfrac{16}{7}$
select	$\dfrac{17}{5}$
select	$\dfrac{13}{5}$
select	$\dfrac{9}{2}$
select	$\dfrac{19}{5}$

2.

3. **Which of the following are answers to the equation below?**

$$\frac{x^2 - 4}{x^2 + 5x + 6} = 0$$

I. -3
II. -2
III. 2

select	III only
select	I only
select	II and III
select	I, II, and III
select	II only

3.

4. $(a+b)^2 = 34$

$\dfrac{ab}{2} = 6$

Quantity A: $a^2 + b^2$

Quantity B: 11

select	The two quantities are equal.
select	Quantity B is greater
select	Quantity A is greater
select	The relationship cannot be determined.

4.

5. The arithmetic mean of a, b, c, and d is 14.

Quantity A: 32

Quantity B: The arithmetic mean of $a + 3b + 2d$ and $a - b + 2c - 48$

select	Quantity A and Quantity B are equal.
select	Quantity A is greater.
select	The relationship between Quantity A and Quantity B cannot be determined.
select	Quantity B is greater.

5.

$x < 0$

$y > 0$

7. Quantity A: $(x + y)^3$

Quantity B: $x^3 + y^3$

select	The relationship cannot be determined.
select	The two quantities are equal.
select	Quantity B is greater.
select	Quantity A is greater.

6.

$x < 0$

$y > 0$

7. **Quantity A:** $(x + y)^3$
   Quantity B: $x^3 + y^3$

select	The relationship cannot be determined.
select	The two quantities are equal.
select	Quantity B is greater.
select	Quantity A is greater.

7.

8. Find the algebraic expression to represent the following statement.
The square of x multiplied by 3, the result has 18 subtracted from it and the final result divided by 15.

select	$\dfrac{3x^2 - 18}{15}$
select	$\dfrac{(3x)^2 - 18}{15}$
select	$\dfrac{3(x^2 - 18)}{15}$
select	$\dfrac{(3x - 18)^2}{15}$
select	$3x^2 - \dfrac{18}{15}$

8.

9. Compare Quantity A and Quantity B and determine which is larger.
   Quantity A: $x^3 - 6$
   Quantity B: $x + 1$
   For when $x \leq 2$

select	Quantity A is larger.
select	The two quantities are equal.
select	Quantity B is larger.
select	Can't be determined from the information provided.

9.

10. How many real solutions are there for the following equation?
$$x^4 + 5x^2 - 14 = 0$$

select	3
select	1
select	0
select	4
select	2

10.

11. Simplify the following expression: $3\sqrt{27} + 5\sqrt{48} - 3\sqrt{147}$

select	$8\sqrt{3}$
select	$5\sqrt{72}$
select	$5\sqrt{3}$
select	$2\sqrt{76}$
select	Cannot be simplified any further

11.

12. $0.327 + \left(\dfrac{3}{8} - (0.048 + 2.176) \right) = ?$

select	0.0532
select	1.242
select	0.793
select	−1.522

12.

13. Which of the following is true?

Quantity A: $\dfrac{12}{7} - \dfrac{3}{5}$

Quantity B: $\dfrac{11}{6} - \dfrac{7}{8}$

select	The relationship between the quantities cannot be determined.
select	Quantity B is larger.
select	The two quantities are equal.
select	Quantity A is larger.

13.

14. If the product of two distinct integer is 143, which of the following could not represent the sum of those two integers?

select	144
select	-144
select	24
select	-24
select	11

14.

15. A cake order cost $45.40 before tax. If the tax rate is 6.5%, what is the price of the cake after tax is applied?

select	$48.99
select	$5.34
select	$49.42
select	$48.35
select	$2.95

15.

16. At an overpriced department store there are 112 customers. If 43 have purchased shirts, 57 have purchased pants, and 38 have purchased neither, how many purchased both shirts and pants?

select	74
select	26
select	38
select	14
select	The answer cannot be determined.

16.

The arithmetic mean of a, b, and c is 13

17. Quantity A: The arithmetic mean of $2a + b, b + 3c, 39 - c$
Quantity B: 39

select	The two quantities are equal.
select	Quantity B is greater.
select	The relationship cannot be established.
select	Quantity A is greater.

17.

18. A boy with a lemonade stand sells cups of lemonade for a quarter each. He has bought $\$20$ worth of supplies and is able to make 500 cups of lemonade with the supplies. If he has to pay a business tax of 4% for each cup he sells, how many cups will he have to sell in order to break even?

select	83.2 cups
select	84 cups
select	83 cups
select	It is impossible for him to profit from this business venture
select	82 cups

18.

19. The average of five consecutive integers is 6. What is the largest of these integers?

select	7
select	6
select	12
select	8
select	10

19.

20. Simplify:

$$\frac{\frac{1}{2}}{8} + \frac{\frac{x}{4}}{4}$$

select	$\frac{1+x}{16}$
select	$\frac{3x+4}{8}$
select	$\frac{x+6}{32}$
select	$\frac{x+12}{3}$
select	$1+\frac{x}{4}$

20.