Mathematics & Science Quiz

Section 1: Identification (Write the answer)

1. Solve for x: $2x + 5 = 15$

   Answer: $x = 5$

2. What is the quadratic formula? (Write the complete formula)

   Answer: $x = (-b \pm \sqrt{(b^2 - 4ac)}) / 2a$

3. Calculate: $3^4 = ?$

   Answer: 81

4. What is the chemical formula for water?

   Answer: H_2O

5. Solve the equation: $x^2 - 9 = 0$

   Answer: $x = 3$ or $x = -3$

Section 2: Enumeration

1. List the first 5 prime numbers.

   Answer: 2, 3, 5, 7, 11

2. Name three types of chemical bonds.

   Answer: Ionic, Covalent, Metallic

3. List the four basic arithmetic operations.

   Answer: Addition, Subtraction, Multiplication, Division

Section 3: Multiple Choice

1. What is the value of π (pi) approximately?

a) 2.14

b) 3.14

c) 4.14

d) 5.14

> **Answer:** b) 3.14

2. Which equation represents the Pythagorean theorem?

a) $a + b = c$

b) $a^2 + b^2 = c^2$

c) $a^2 - b^2 = c^2$

d) $ab = c$

> **Answer:** b) $a^2 + b^2 = c^2$

3. What is 25% of 80?

a) 15

b) 20

c) 25

d) 30

> **Answer:** b) 20

4. The chemical formula CO_2 represents:

a) Carbon Monoxide

b) Carbon Dioxide

c) Cobalt Oxide

d) Calcium Oxide

> **Answer:** b) Carbon Dioxide

Section 4: True or False

1. The square root of 144 is 12.

> **Answer:** True

2. The equation $5x = 20$ has the solution $x = 5$.

> **Answer:** False ($x = 4$)

3. In the equation $E = mc^2$, E represents energy.

Answer: True

4. The sum of angles in a triangle is 360 degrees.

Answer: False (180 degrees)

5. H_2SO_4 is the chemical formula for sulfuric acid.

Answer: True

6. The expression $(x + 3)(x - 3)$ equals $x^2 - 9$.

Answer: True