1. Which of the following represents a linear equation in two variables?
   A. $3x + y = 2$
   B. $x^2 + y^2 = 10$
   C. $x^3 + y^3 = 0$
   D. $2xy = 5$ (A)

Explanation: A linear equation in two variables is of the form ax + by =c prime where a, b, and c are constants, and x and y are variables.

2. What does the graph of a linear equation in two variables represent?
   A. A point
   B. A straight line
   C. A curve
   D. A parabola (B)

Explanation: The graph of a linear equation in two variables always represents a straight line.

3. What is the standard form of a linear equation in two variables?
   A. $ax + by + c = 0$
   B. $ax + b = c$
   C. $X^2 + y^2 = r^2$
   D. $y = mx + b$ (A)

Explanation: The standard form of a linear equation in two variables is ax + by + c = 0 where a, b, and c are constants

4. What is the solution to the equation $3x + y = 7$ when $x = 2$?
   A. $y = 1$
   B. $y = 2$
   C. $y = 3$
   D. $y = 4$ (A)

Explanation: Substituting 2 into the equation 3(2) + y = 7 we get 6 + y = 7 which simplifies to y = 1

5. If the equation $4x - 3y = 12$ what is the value of y when $x = 0$?
   A. $y = 4$
   B. $y = 4$
   C. $y = 0$
   D. $y = - 3$ (A)

Explanation : Substituting x = 0 into the equation 4(0) - 3y = 12 we get - 3y = 12 which simplifies to y = - 4

6. What does the solution of a linear equation in two variables represent geometrically?
   A. A point on the graph
   B. A straight line on the graph
   C. The area of a triangle
   D. The distance between two points (A)

Explanation: The solution of a linear equation in two variables represents a point on the graph, where the line intersects the coordinates

7. Which of the following is a real-life situation that can be represented by a linear equation in two variables?
   A. The path of a projectile
   B. The motion of a free-falling object
   C. The cost of a pencil and eraser combined
   D. The population growth of a city (C)

Explanation: The relationship between the cost of a pencil and an eraser can be modeled by a linear equation, where one variable represents the number of pencils and the other represents the number of erasers

8. What is the equation representing Ram's age being 3 times more than twice Mohan's age?
   A. $y = 2x + 3$ B. $x = 2y + 3$
   C. $2x + y = 3$ D. $x + 2y = 3$ (A)

Explanation: Let Mohan's age bez and Ram's age be y. The equation representing the relationship is y = 2x + 3 as Ram's age is 3 more than twice Mohan's age

9. What is the equation $2x + 2y = 4.37$ in the form $ax + by + c = 0$?
   A. $2x + 3y - 4.37 = 0$
   B. $3x + 2y - 4.37 = 0$
   C. $2x + 3y + 4.37 = 0$
   D. $2x - 3y + 4.37 = 0$ (A)

Explanation: To convert the equation 2x + 3y = 4.37 into the form ax + by + c = 0 we subtract 4.37 from both sides to get 2x + 3y - 4.37 = 0

10. What is the solution to the linear equation $2x + y = 3$ when $x = 1$?
    A. $y = 2$ B. $y = 1$
    C. $y = 0$ D. $y = 3$ (B)

Explanation: Substituting x = 1 into the equation 2(1) + y = 3 we get 2 + y = 3 which simplifies to y = 1