Vu Buddy- MTH501

1. **[math-block] {\text{If }}A = \left({\begin{array}{*{20}{c}} 1&2 \\ 3&6 \end{array}} \right)\mathop \sim \limits^{{\text{Row Equivalent}}} \left({\begin{array}{*{20}{c}} 1&2 \\ 0&0 \end{array}} \right), {\text{then the Columns of}} ~{\text{A}} ~{\text{are}} ~ {\text{Linearly}} {\text{ - - - - - - - }} [/math-block]**

   a. Independent

   b. Dependent

2. **If a matrix is in reduced row echelon form, then it is also in row echelon form.**

   a. May be

   b. True

   c. False

   d. None of the above

3. **[math-block] {\text{Which of the following would be the value of t, if}} \left[{\begin{array}{*{20}{c}} {2{e^{ - 3t}}} \\ {5{e^{ - 3t}}} \end{array}} \right] = \left[{\begin{array}{*{20}{c}} 2 \\ 5 \end{array}} \right]? [/math-block]**

   a. [math-block] \pm \frac{1}{3} [/math-block]

   b. [math-block] \frac{{\left[{\begin{array}{*{20}{c}} 2 \\ 5 \end{array}} \right]}}{{\left[{\begin{array}{*{20}{c}} 2 \\ 5 \end{array}} \right]}} = 1 [/math-block]

   c. [math-block] \left[{\begin{array}{*{20}{c}} 1 \\ 1 \end{array}} \right] [/math-block]

   d. zero

4. **Which of the following property does not hold for matrix multiplication?**

   a. Commutative

   b. Associative

   c. Additive inverse

   d. Distributive

5. **[math-block] \begin{array}{*{20}{c}} \begin{gathered} {\text{The}} ~{\text{Equations:}} \ \begin{array}{*{20}{c}} {2x - y = 6} \\ { - x + \frac{1}{2}y = \frac{{ - 3}}{2} ,} \end{array} \\ \end{gathered} \\ {{\text{is an example of - - - - - System}}{\text{.}}} \\ {} \\ {} \end{array} [/math-block]**

   a. Non-Linear

   b. Homogeneous

   c. Consistent

   d. Inconsistent

6. **[math-block] \begin{array}{*{20}{c}} {{\text{The system of equations}}:} \\ {{x_1} = 1, } \\ \begin{gathered} {x_2} = 0; \ {\text{can be expressed in the form - - - - }}. \\ \end{gathered} \end{array} [/math-block]**

   a. [math-block] Ax = 0 [/math-block]

   b. [math-block] Ax = b [/math-block]

   c. [math-block] \begin{array}{*{20}{c}} {Ax = 0} \\ {By = 1} \end{array} [/math-block]

   d. [math-block] \begin{array}{*{20}{c}} {Ax = 1} \\ {By = 0} \end{array} [/math-block]

7. **[math-block] If~\left[{\begin{array}{*{20}{c}} 8&{ - 12} \\ {40}&{60} \end{array}} \right] = k\left[{\begin{array}{*{20}{c}} 2&{ - 3} \\ {10}&{15} \end{array}} \right], then ~the ~value~ of~ k = - - - - . [/math-block]**

   a. -4

      [math-block] \frac{{\left[{\begin{array}{*{20}{c}} 8&{ - 12} \\ {40}&{60} \end{array}} \right]}}{{\left[{\begin{array}{*{20}{c}} 2&{ - 3} \\ {10}&{15} \end{array}} \right]}}

   b. [/math-block]

   c. [math-block] \left[{\begin{array}{*{20}{c}} 4&4 \\ 4&4 \end{array}} \right] [/math-block]

   d. 4

8. **The order of matrix [math] [2 \,\ 1 \,\ 3] [/math] is**

   a. 2-by-3

   b. 3-by-1

   c. 1-by-3

   d. 2-by-1

9. **[math-block] {\text{The equation}}: 0x - 0y = - 5 ~~ {\text{has - - - - solution(s)}}{\text{.}} [/math-block]**

   a. distinct finite

   b. Infinite many

   c. Unique

   d. No

10. **A linear equation in three variables always represent a - - - - - .**

    a. [math-block] {\text{Line in}} {\mathbb{R}^3}(3 - dimension) [/math-block]

    b. [math-block] {\text{Plane in}} {\mathbb{R}^3}(3 - dimension) [/math-block]

    c. [math-block] {\text{ Plane in}} {\mathbb{R}^2}(2 - dimension) [/math-block]

    d. [math-block] {\text{Line in }}{\mathbb{R}^2}(2 - dimension) [/math-block]

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