**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

**Solve the problem.**

1) Best Rentals charges a daily fee plus a mileage fee for renting its cars. Barney was charged $ 147 for 3 days and 300 miles, while Mary was charged $ 268 for 5 days and 600 miles. What does Best Rental charge per day and per mile? 1) \_\_\_\_\_\_\_

A) $ 26 per day, 23¢ per mile B) $ 23 per day, 26¢ per mile

C) $ 25 per day, 24¢ per mile D) $ 27 per day, 24¢ per mile

**Write an equation for the line. Use slope-intercept form, if possible.**

2) Through ( 5, -6) and ( 0, -8) 2) \_\_\_\_\_\_\_

A) y = 11/8x -8 B) y = -11/8x - 8

C) y = 2/5x - 8 D) y = -2/5x - 8

**Use the echelon method to solve the system of two equations in two unknowns.**

3) 5x - 7y = 8

 3x - 4y = 5 3) \_\_\_\_\_\_\_

A) ( 3, 2) B) ( 2, 2) C) ( 3, 1) D) No solution

**Write the augmented matrix for the system. Do not solve.**

4) -2x + 6y = 40

 2x + 2y = 8 4) \_\_\_\_\_\_\_

A)

|  |  |  |
| --- | --- | --- |
| 40 | 6 | -2 |
| 8 | 2 |  2 |

B)

|  |  |  |
| --- | --- | --- |
| -2 | 6 | 40 |
|  2 | 2 |  8 |

C)

|  |  |  |
| --- | --- | --- |
| -2 | 6 | 8 |
|  2 | 2 | 40  |

D)

|  |  |  |
| --- | --- | --- |
| -2 | 2 | 40 |
|  6 | 2 |  8 |

**Find the slope of the line passing through the given pair of points.**

5) ( 3, 2) and ( 3, 9) 5) \_\_\_\_\_\_\_

A) Undefined B) - 7/6 C) 0 D) 11/6

**Use the echelon method to solve the system of three equations in three unknowns.**

6) x + y + z = 2

 x - y + 5z = 0

 4x + y + z = 14 6) \_\_\_\_\_\_\_

A) ( -1, -1, 4) B) ( 4, -1, -1) C) ( -1, 4, -1) D) No solution

**Find the slope of the line.**

7) A line parallel to 4y - 5x = -7 7) \_\_\_\_\_\_\_

A) 7/5 B) 5/4 C) 4/5 D) - 5/4

**Use the echelon method to solve the system.**

8) x/2 + y/2 = 0

 x - y = -12 8) \_\_\_\_\_\_\_

A) (-6,6) B) (6,7 ) C) (-7, 7 ) D) No solutuion

**Solve the problem.**

9) Let the supply and demand functions for a certain model of electric pencil sharpener be given by

 p = S(q) = 2/3q and p = D(q) = 15 - 4/3q

where p is the price in dollars and q is the quantity of pencil sharpeners (in hundreds). Graph these functions on the same axes (graph the supply function as a dashed line and the demand function as a solid line). Also, find the equilibrium quantity and the equilibrium price.

 9) \_\_\_\_\_\_\_

A)



Equilibrium quantity: 750

Equililbrium price: $5

B)



Equilibrium quantity: 950

Equilibrium price: $7

C)



Equilibrium quantity: 900

Equilibrium price: $6.00

D)



Equilibrium quantity: 600

Equilibrium price: $9.00

**Find the slope of the line.**

10) A line parallel to -4x = 5y + 11 10) \_\_\_\_\_\_

A) – 11/4 B) -5/4 C) -4/5 D) 4/5

**Use the echelon method to solve the system of two equations in two unknowns.**

11) x - 2y = -2

 6x - 3y = -30 11) \_\_\_\_\_\_

A) ( -6, -2) B) ( -7, -1) C) ( 6, -1) D) No solution

**Provide an appropriate response.**

12) Find k so that the line through (3, k) and (1, -2) is parallel to 5x – 3y= -2. Find k so that the line is perpendicular to 3x + 2y = 6 12) \_\_\_\_\_\_

A) 4/3; -2/3 B) 16/3; -10/3 C) 4/3; -10/3 D) 16/3; -2/3

**Write an equation for the line. Use slope-intercept form, if possible.**

13) Through ( 4, 0), m = -1 13) \_\_\_\_\_\_

A) y = x - 4 B) y = - 4x C) y = -x + 4 D) y = 4x

**Write the augmented matrix for the system. Do not solve.**

14) 4x - 2y = 14

 -2y = -2 14) \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **A)** | **14** | **-2** |  **4** |  | **B)** | **-2** |  **0** | **-2** |  | **C)** | **4** | **-2** | **14** |  | **D)** |  **4** | **-2** | **14** |
|  | **-2** |  **0** | **-2** |  |  |  **4** | **-2** | **-2** |  |  | **0** | **-2** | **-2** |  |  | **-2** | **-2** | **0** |

**Find the slope of the line passing through the given pair of points.**

15) ( 5, 4) and ( 2, 2) 15) \_\_\_\_\_\_

A) 2/3 B) 3/2 C) -2/3 D) 6/7

**Use the Gauss-Jordan method to solve the system of equations.**

16) 3x + 3y = -6

 2x + 8y = 14 16) \_\_\_\_\_\_

A) ( 3, -5) B) ( -5, -3) C) ( -5, 3) D) No solution

**Write an equation for the line. Use slope-intercept form, if possible.**

17) Through ( 3, 5), m = - 5/9 17) \_\_\_\_\_\_

A) y = -5/9x + 5/3 B) y = 5/9x -20/3

C) y = 5/9x + 5/3 D) y = -5/9x + 20/3

**Find the slope of the line.**

18) 5x + 2y = 16 18) \_\_\_\_\_\_

A) 8 B) 5/2 C) -5/2 D) 2/5

**Use the echelon method to solve the system of two equations in two unknowns.**

19) x + 3y = 9

 -7x + 4y = 12 19) \_\_\_\_\_\_

A) ( -3, 0) B) ( 1, 2) C) ( 0, 3) D) No solution

**Find the slope of the line passing through the given pair of points.**

20) ( 6, -4) and ( -7, 1) 20) \_\_\_\_\_\_

A) – 5/13 B) -13/5 C) 5/13 D) 3